Large Vesical Calculus removed through a Vesico-cervico-vaginal Fistula.

By CUTHBERT LOCKYER, M.D.

The calculus, now exhibited, was removed on November 28, 1910, from the bladder of a multipara eleven months after the last confinement. The clinical history is as follows: Patient, aged 38, married twelve years; five children, no abortions. The last confinement fourteen months ago. All labours were instrumental. On October 16, 1909, labour-pains began at 9 a.m. Delivery by forceps was carried out at 2 p.m. Incontinence of urine commenced the same day. There was no post-partum haemorrhage. Dr. Bell, of Luton, tried to close a fistula on the ninth day of the puerperium. Twelve days later (November 4) the patient was admitted into the Bute Hospital, Luton, because the first operation had not been successful. Two subsequent attempts at closure also failed, and the patient was sent to me on November 26, 1910—eleven months after the third operation. She was then wearing a rubber urinal; the buttocks were excoriated and bathed in foul urine. The perineum was sound. Large masses of phosphates hung on strands of silk from the roof of the vagina. The anterior wall of the cervix was lacerated for a distance of 1 1/2 in. in the vertical line, with the posterior wall of the cervix forming the floor of a large vesico-vaginal fistula. The laceration in the floor of the bladder admitted three fingers easily; it extended above for about 1 1/2 in. above the cervical tear. On November 28 I removed the lumps of phosphatic deposit adhering to the edges of the fistula, and after cleansing the parts, the bladder was separated from the anterior wall of the cervix and the latter was sutured by four interrupted thick catgut sutures. The bladder was then separated from the vaginal wall and from the lateral connective tissues. A large calculus measuring 5 1/2 in. in circumference was then withdrawn through the rent in the bladder; the latter was very contracted and its cavity seemed to be about the size of the phosphatic mass which occupied it. When fully exposed the vesical tear was seen to be circular in front and tailed off
into a linear wound above. The mucous membrane was nearly \( \frac{1}{2} \) in. thick and intensely congested. Redundant mucosa was cut away and the thick oedematous fibro-muscular wall was pared with a fine fistula-knife and brought together by interrupted catgut sutures. The deep lateral recesses between the bladder and pubic rami were closed by mattress-sutures of catgut passed through the retracted pubo-coccygei muscles and through the central line of the bladder-wall. The bladder was then sewn to the cervix by catgut. The vaginal flaps were now reduced to a suitable extent, and then united across the middle line, whilst their lower ends were united to the cervix to form a \( \perp \)-shaped scar. Interrupted fishing-gut sutures were used for this, and between these stitches a drain of bismuth gauze was inserted. A self-retaining catheter was placed in the bladder.

On December 9, eleven days after the operation, sterile milky water introduced \emph{per urethram} was seen to escape through the external os uteri. The bladder was again separated from the cervix and from the vagina. A fistula which admitted \emph{one} finger was found; its edges were freshened and then united with catgut. This time the bladder was not sewn to the cervix but a gauze drain was inserted into the vesicocervical interval. The fistula closed, and the patient writes annually to say she is in good health.

\textbf{DISCUSSION.}

\textbf{Mr. Douglas Drew}: There is an interesting point which Dr. H. Roberts has mentioned—namely, that so large a stone did not cause any difficulty in delivery. My suggestion is that possibly the stone slipped up into the dilated ureter above. I here show a specimen of a ureteral stone, over 1 in. in length and about as thick as the little finger, which I removed by the ilio-lumbar incision. The interesting feature of the case was that the stone, although tightly impacted in the ureter, could not only be drawn down by the finger into the vagina, but it could also be pushed up so that the fingers on the abdomen could be placed below it, showing how very mobile the ureter may be when it contains an impacted stone. It is my experience that before a stone reaches so large a size the ureter is liable to become fixed to surrounding structures owing to periureteritis being set up.

\textbf{Dr. Hubert Roberts}: The following are short notes of a curious case which I was called to see ten or eleven years ago at the request of Dr. Stanley Box, of Ealing. It was that of an old lady, aged 70, who had a horrible discharge and incontinence both of faeces and urine. On examination, a large hard mass was found in the vagina the size of a cricket ball, and in its centre the steel ends of a forgotten Zwancke's pessary. The mass was very foul, and tightly wedged
in the roof of the vagina. The patient thought a pessary had been placed there over twenty-four years ago. All ordinary efforts to remove the calculus with gynecological instruments failed so I was forced to use some heavy tools from my motor car (boiled of course). With the help of these I broke up the calculus and removed the pessary piece-meal. One wing had entered the bladder and the other the rectum. The operation was a severe one but the patient ultimately did quite well. I rang up Dr. Box on October 2, 1916, to inquire about the case and he informed me that the lady was still alive and well (now aged 80), and that both the fistulae had eventually closed.

(October 5, 1916.)

Concealed Accidental Hæmorrhage with Intraperitoneal Bleeding.

By ARTHUR J. McNAIR, M.D.

MRS. A. K., aged 34, 6-para, was admitted into Guy's Hospital on May 12, 1916, from the Maternity Charity. Mr. Bellingham Smith kindly permits me to publish these notes. Five previous gestations terminated naturally at full term. Her present pregnancy, which was at the thirty-fourth week, had been complicated by the occurrence of profuse uterine hæmorrhage at the third month. This bleeding persisted for four days, but then ceased, and did not recur. She had also, in March, vomited a large quantity of blood on two occasions.

On the morning of the day of admission she arose from her bed to prepare breakfast, and was immediately seized with agonizing pains in her abdomen. She fainted, but soon recovered consciousness, and the pain became less. On again attempting to leave her bed, however, later in the day, she was once more attacked with griping abdominal pain, which gradually became continuous and more severe. She stated that the pains were quite unlike the pains of labour, and that there had been no "show." It is, perhaps, worthy of mention that on the previous day she had carried a child, aged 3, to the hospital and back.

On admission she was blanched, her skin was moist with perspiration, her breathing was rapid and restrained, and her pulse was feeble and irregular. Her uterus, the fundus of which reached to the ensiform cartilage, was of woody hardness; there was no alternation of contraction.
All the men had worked steadily at various occupations of a manual character when in civil life. None showed any criminal or other psychopathic trends. But the noticeable feature was their blase manner, almost amounting to indifference, with which they discussed their ailment. Their attitude can be summed up best in their common answer, "I can't help it."

Summary of Clinical Data.—The factors here presented may be summarized under four headings: (1) a family history of neuropathic or cardiorenal disease; (2) a history of nocturnal enuresis, existing since childhood, with periods of remission, and always accompanied by imperative urination and by deep sleep; (3) a disclosure on physical examination of vagotonic trends, with negative neurologic and urologic findings, (4) all associated with certain borderline defects in mental efficiency.

COMMENT

There is a constant feature in these cases: the noticeable lack of any gross pathologic findings. The cystoscopist has always found normal bladder walls and contents, but has noted the increased spasm of the compressor urethrae muscle. Neurologic lesions of the cord were not present.

Any explanation as regards etiology must be presented, then, on an empiric basis. It may be said that the lack of character formation must be considered; but we find that these men are at a period of life when such conditions should be corrected with ease. Instead, our psychotherapeutic measures have failed to be of any value.

Adler\(^3\) believes that this condition can be grouped under the examples of inherited organ inferiority wherein the compensatory overgrowth of other parts of the organ or of other organs has failed to obscure and arrest the defects resulting. Since organ inferiority manifests itself in the most diverse parts and functions of that organ, we have an explanation of our failure to find any gross pathologic conditions. The evidence presented by the cystoscopist would suggest faulty innervation of the bladder and compressor urethrae muscle. The factor of inheritance per se is not as clear in this group of cases as might be wished for. The fact that nine patients gave a family history of enuresis or cardiorenal disease is in support of this view. In addition, the psychiatric examinations reveal certain defects present: a fertile ground for the growth or accentuation of any neurrosis. Hence, when this is added to the organ inferiority noted, this condition of enuresis, less noticeable in civilian life, becomes, because of the increased monotony, stress and exhaustion of military life, markedly accentuated.

SUMMARY

1. Nocturnal enuresis in adults is a distinct clinical entity, which does not respond to the routine treatment usually effective in younger individuals.

2. Certain constant clinical findings have been noted.

3. The etiology is obscure. The theory of inherited organ inferiority is applicable.

4. Nocturnal enuresis, idiopathic, is a form of neurrosis—a psychophysical defect—wherein the factors of monotony and exhaustion exaggerate the morbid potential present.

DYSTOICIA FROM LARGE BLADDER STONE IMPACTED IN THE PELVIS

C. S. NEER, M.D.
VINITA, OKLA.

From a hasty review of the literature it would appear that serious interference with childbirth by vesical calculi is rather rare. Considering the enormous size which bladder stones sometimes attain, it is surprising that they are not a more common cause of dystocia. That they are not is doubtless due to their comparative rarity in women. Winkle found bladder stone in only one of 10,000 women examined.

Fig. 1.—Relation of the stone to the head of the fetus.

Pinching of the bladder and anterior vaginal wall with resulting fistula, by stones too small to cause marked obstruction to the descending head, seems to be more common. Thus in Kotschurowa's case referred to by Hirst, labor lasted three days.

At the end of that time a gangrenous tumor protruded from the vulva, which tumor proved to be the bladder and anterior vaginal wall. The midwife in attendance perforated the tumor with her finger, whereupon a calculus 85 grains in weight was discharged.

G. A. Wagner in 1907 collected forty-six instances from the literature and reported one in which a stone 2 by 4 by 6 cm. became impacted between the symphysis and the head. The nature of the obstruction was not recognized until labor had gone on four days, when it proved to be possible to reduce the stone under general anesthesia and effect delivery. Wagner urges the importance of removing bladder stones before childbirth and considers colpocystotomy with immediate suture of the bladder a very satisfactory procedure.

The diagnosis of bladder stone in the parturient appears to be somewhat difficult. It has been mistaken for pelvic exostosis, cervical fibroid or other pelvic tumor, and according to Hirst, in one case at least, cesarean section was performed on account of this mistake.

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TABLE 2.—PSYCHOMETRIC TESTS

<table>
<thead>
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<th>No. of Cases</th>
<th>Total Credits</th>
<th>Mental Age</th>
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<tr>
<td>4</td>
<td>60 plus</td>
<td>Adult</td>
</tr>
<tr>
<td>6</td>
<td>From 15 to 90</td>
<td>From 12 to adult</td>
</tr>
<tr>
<td>10</td>
<td>From 60 to 72</td>
<td>From 11 to 12</td>
</tr>
<tr>
<td>2</td>
<td>From 56 to 60</td>
<td>From 9 to 10</td>
</tr>
<tr>
<td>1</td>
<td>From 40 to 50</td>
<td>From 8 to 9</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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The case that I report is interesting not so much because of the size of the stone as from the fact that it became impacted down deeply in the pelvis in front of the descending head in such a way as to prevent further progress, and in such position as to give rise to some temporary difficulty in diagnosis.

REPORT OF CASE

Mrs. C. F., aged 30, the wife of a farmer living 15 miles in the country and the mother of two children, went into labor, Oct. 19, 1908. I saw her with her attendant, Dr. L. C. White, at 6 p.m., eight hours after the onset. The patient had had considerable pain and tenderness in the lower abdomen during the last two months of pregnancy, and had been confined to her bed much of that time. Later a history of renal colic five years before and of the passage of a small stone from the bladder two years before was obtained. At the time of examination there was a mass as large as a small orange occupying the right side of the pelvis between the uterus and the lateral pelvic wall. The mass seemed quite fixed, and examination caused considerable pain. The cervix was high, being crowded very much toward the left by the tumor, and dilated to a diameter of about 1 inch.

The most probable diagnosis on first examination seemed that of cervical fibroid. Indeed, the position of the mass as indicated by vaginal touch was almost identical with that of a case of cervical fibroid that I saw a few days later. It was evident that the child could not be born by the natural passage until the obstruction was removed. Accordingly we secured additional assistance and made preparation to do what seemed best when conditions should be more accurately determined under anesthesia. With the patient fully anesthetized we found that the mass could be moved, and its relation to the bladder was determined. A sound introduced into the bladder proved it to be a stone. Removal through the vagina was contemplated, but after some manipulation we were able to push it upward out of the pelvis, after which forceps were applied to the head and delivery easily effected. The periperal was normal.

The stone was removed by suprapubic cystotomy two months later. It was of the shape of a flattened sphere measuring in its greatest diameter 2¼ inches and weighing 6 ounces.

Even Then.—"Nothing can be more pernicious to the health of the people, than a numerous trade, which, to maintain itself, shall be urging the vent of physic in great quantities to all ages, constitutions and diseases."—R. Pitt, M.D., in "The Crafts and Frauds of Physic Exposed," 1703.

MUTIPLE MYELOMA WITH BONE MARROW PLASMA CELLS IN THE BLOOD

REPORT OF CASE

HARVEY G. BECK, M.D.
AND
STANDISH McCLEARY, M.D.
BALTIMORE

CLINICAL OBSERVATIONS, BY DR. BECK

Owing to the fact that Bence-Jones proteinuria and multiple myeloma are conditions of rare occurrence, one not only should feel justified, but also should feel it a duty to the profession to report individual cases, especially so long as we need more light on the pathologic and clinical features of the disease.

The case hereafter reported is of special significance since bone marrow plasma cells were found in the circulating blood by one of us, a condition rarely seen.

An examination of the literature for the history of cases of multiple myeloma makes it evident that the disease, although rare, has not often been recognized. Thirty-seven years elapsed between the time Bence-Jones discovered the phenomenon in the urine, in 1840, and the report of the second case by Kühne. Fifty years after the discovery, only four authenticated cases were added to the literature.

In the three succeeding years, records of eight cases appeared which were reported by Louis Hamburger,1 to which he added two cases studied by himself, one a patient of Dr. Iglehart's, the other Dr. Osler's patient.

In 1905, Woods2 was able to collect thirty instances, while at present the number has increased to about 100.

Fig. 1.—Smear from marrow of clavicle, showing large numbers of plasma cells with eccentric nuclei and distinct nucleoli.

It will thus be observed that the disease is much more prevalent than one would have supposed it to be years ago, and that it is gradually becoming more generally recognized.

2. Woods: Chemical and Microscopical Diagnoses, 1905.
called upon to give a conclusive verdict might make mistakes. Again, this procedure was presented as a great act of benevolence. Then the right person to perform it was not the doctor, but the relative or friend. How many of those who had spoken would give the cup of poison to a dear one? The reluctance to take part in this formidable and dramatic ritual was due to the sound human instinct that their responsibility was to preserve life, not destroy it.

Resolution Adopted

Lord Moyhnhan said that he had allowed Dr. Hawthorne to go on because he thought he was putting up a poor case, and thereby he served their own. However exceptional the condition might be for which relief was sought, those who had seen it would feel that justice was on their side. Dr. Hawthorne had made the unworthy point that doctors were capable of making mistakes. In the kind of case they had in mind there was no possibility of doubt whatever. As for Dr. Hawthorne’s last question, if it were the person he himself loved most in all the world he would be ready to agree to act under circumstances such as he had described.

The resolution—

That in the interests of humanity it is desirable that voluntary euthanasia subject to adequate safeguards should be legalized, and that safeguards should be inserted into the law which will make it impossible for anyone to suffer from incurable, fatal, and painful disease—

was put to a show of hands, and Lord Moyhnhan declared it carried by about ten to one.

England and Wales

Joint Tuberculosis Council

The chief business of the November meeting of the Joint Tuberculosis Council was the consideration of a report presented by Dr. J. B. McDougall on behalf of the Employment Committee dealing with care and after-care schemes in tuberculosis. Various suggestions were made for Dr. McDougall’s consideration, and the circulation of the report was left to the British Legion Press. On behalf of the Institutions Committee, Dr. Blackmore presented a note dealing with Dr. Heath’s memorandum on tuberculosis institutions and chest hospitals. It was resolved: “That this council is of the opinion that the benefits of major surgery for both tuberculous and non-tuberculous conditions should be available to every patient in need of such treatment, and that steps should be taken by the authorities to provide facilities at tuberculosis institutions if adequate arrangements have not or cannot be made at other institutions.”

Dr. Hawthorne reported, on behalf of the Milk Committee, that the conference at Southport of the National Association for the Prevention of Tuberculosis had expressed high opinion of the value of pasteurization in the production of safe milk, and that the Ministry of Health report took the view that this process did not impair the nutritive value of the milk. A pamphlet on blood sedimentation tests by the Association of Clinical Pathologists, had been circulated to members, and was discussed. A committee, comprising Dr. F. Heath (convener), Drs. R. R. Trail and W. H. Dickinson, and Professor S. Lyle Cummins, was appointed to consider and report to the next meeting of council on the standardization of blood sedimentation tests.” Dr. Brand gave an account of post-graduate courses held this year. One course at the City of London Hospital for Chest Diseases had been attended by twenty-two members, while ten had followed a study tour in Denmark from June 1st to 15th. Dr. Peter Edwards had held six short intensive courses, and from November 4th to 9th there had been a course at the Bromley Hospital. Very high appreciation was expressed of Dr. Brand’s work in arranging these post-graduate facilities. Following receipt of a letter from the College of Nursing asking for advice as to the precautions that should be taken to prevent tuberculous infection among nurses, a committee was appointed, consisting of Dr. Esther Carling (convener), and Drs. Jane Walker and James Watt, to report to the next meeting on the danger to nurses of tuberculous infection and the precautions that should be advised.

The Grove Hospital, Tooting

The new isolation block at the Grove Hospital, Tooting, which was opened on December 6th, has been built as part of the general scheme for the extension of isolation accommodation. It is two stories in height, and provides accommodation for sixty patients in single-bedded wards. The building is related to the other blocks of the hospital, and the wards generally have a south-easterly aspect. In addition to a central entrance, communication to both floors can be effected from the two principal covered ways of the hospital. The wards are separated by partly glazed screens, with duty rooms placed so that the nurses can supervise the patients. Each ward is 11 ft. by 10 ft. by 9 ft. high, giving a cubic space of 990 feet. The additional beds provided in the block require an increase of the residential staff, and an extension of one of the nurses’ homes, with other alterations and improvements to the staff rooms, have been arranged. The estimated cost of the work, including furniture and equipment, is £27,874. The accommodation of the hospital, including the new block, is 616 beds.

Reports of Societies

CARE AND TREATMENT OF DIFFICULT CHILDREN

At the meeting of the Medical Society of London on December 9th, with Professor G. E. Gask in the chair, the subject of discussion was “The Care and Treatment of Difficult Children.”

Dr. Reginald Miller said that children had always been fair game for enthusiastic theorists, and the subject of child psychology, handed on from the medical profession, had turned the heads of the public, though it would be rash to assume that it was the imagination only of the laity that was affected. Widely organized efforts were being made to teach parents how to deal with their children’s behaviour. When such teaching was adapted to the capacity of the uneducated, the results, if any, might be beneficial, but in the case of the educated, to whom psychological literature was available, he doubted whether the result was going to be as satisfactory as was hoped. There were now parents who were tinkering with their children’s psychology as they used to tinker with their insides. But the best way of psychologists was the way in which they linked directly cause and effect, in a manner too facile to be convincing. Nor did their explanations of the origin of symptoms by any means tally. They claimed good results for several methods of treatment based on different hypotheses. Far too little credit was given to the beneficial effects of the passage of time and the gradual development of the child. The great majority of children had been included at some time or other in the ‘difficult’ category, though the term was supposed to denote the neurotic and undis-
children; over-discipline and under-discipline. To these opposite was attributed the mental reaction which was fundamentally much the same in all difficult children —namely, the negative, unreasonable attitude which the child adopted to gain its ends. These faults only acted as determinants, determining the nature and time of the child's symptoms. The thing of vital importance was the psychological make-up of the child and its physical condition. The make-up was the most important single factor in the production of its troubles. The passage of time and the development of the child vastly altered the pattern of its mind, usually to the advantage, still less as a nervous disorder.

The effect of physical health on child mentality was far greater than would appear from the lip service paid to it by psychologists. Illness profoundly altered the mentality, and the nature of the ill-health might determine the nature of the nervous symptoms. None of the major perversions of appetite, such as persistent refusal of food, apparently volitional vomiting, eating of bedclothes, and so on, arose in children whose digestions were in good order; although the habit might have been put right. It was not as a rule difficult to recognize that the difficult child was fatigued or out of health, and these conditions required strict treatment, however interesting the psychological picture might be.

The Ideal Discipline

What, asked Dr. Miller, were the most desirable attributes of a mother? The first essential was that the mother should enjoy her child, regarding it neither as a rival nor as a rival, still less as a nervous disorder. Her love should be something more supporting than mere protection. Difficult children could not be successfully treated by superabundant protection. What they wanted was a process of desensitization so that normal stimuli did not evoke excessive response. Not every child wanted the superior of mother—what reminded him of what excellent "mothers" some fathers made! The ideal discipline was less a matter of rules and regulations than of atmosphere. One of the advantages of the preparatory school over the home was that the affections were not so heavily engaged; the child was watched over by someone who was not accused nor hearten from anything to do, and therefore misdemeanours ceased to be adventures. But the more blatant difficulties did not arise in children who could rely on getting something analogous to a "sound clipp on the ear" if they transgressed unreasonably. As a punishment this had its points, being immediate, unpleasant, and soon over. But if punishment was going to do any child good—and for nervous children it was not to be advocated—it should be ordered in cold blood, with at least some show of reason. Rest in bed was the best of all correctives. This might be used with little or no idea of punishment, but if meant as a punishment most compensation or indulgence should be regarded as of its essence, and to ensure benefit from the rest books should be allowed and the supply of food not curtailed.

Finally, with regard to psycho-analysis, this was in such bad odour with the physicians of his generation that he felt no obligation to pay tribute to its sincerity and power. But the humility of the group of physicians who were attempting to approach the problems of child psychology by that route. He doubted whether psycho-analysis could ever be the correct form of treatment for the neurotic child, but as a method of investigation it might lead to useful conclusions to be applied in other cases without submitting each fresh child to the process of analysis.

Disorders of Child Behaviour

Dr. William Moodie of the Child Guidance Clinic said there was being created in this country and elsewhere a kind of "psychology consciousness," not entirely confined to the lay public, and this had antagonized scientific thinkers and retarded the study of practical psychology; this was a pity, psychology being an excellent servant though a disturbing master. The difficult children fell into two classes: (1) children showing disorders of behaviour, also nervous symptoms, suggesting the laying down of the foundation of functional nervous disorders; (2) delinquents. But the difficult child in the view of the ordinary layman was one who manifested disorders of behaviour or a peculiar manner of normal child behaved in an unusual way at times, because the art of learning to behave in early life was not easy. Behaviour which might be normal enough at one age was an anarchism at another. The problem really related to behaviour occurring out of its usual sequence. Some of the things might not be explained by personality at all, but if a child was found sucking his thumb at the age of 8 that was generally not the only symptom; as a rule he was doing other things also unusual. In the behaviour of these difficult children there were syndromes, complexes, significant of deep-lying mental disturbance. Behaviour was the result of two separate but interdependent sets of circumstances—those of the moment and those of the past, and to these must be added the state of health of the individual.

In investigating these difficult children the first essential was a spirit of detachment. Every normal adult had an instinct to control and manage children, and in such an attitude didactic methods might be adopted which in psychology seldom carried far. The investigation must also be careful and detailed; one must not too readily jump to conclusions. Every complete physical examination, a thing often overlooked in psychiatric work. It must take note of minor as well as major disturbances. An accurate estimation of intelligence was essential, to be done by the proper application of standardized tests with reference to an educational attainment level. Some general estimation of the personality must be framed by direct observation of the child at play and from his history, and a picture of his environment must be obtained.

The Question of Treatment

For purposes of treatment he classified the children into groups. The first was the stable child, a child to try to adapt to abnormal conditions in their environment. Here the treatment must be carried out by way of the parents or guardians, as they were responsible for the abnormal conditions. The second class consisted of children who, though relatively stable, had been taught a bad set of living and had developed neuroses. Many of the anxious, excited, thin, overactive children came into this category, which was a very large one. The causes were lack of outlet for mental energy, also a feeling of insecurity. The children were often worn out by their own activity. There was only one remedy for this excess of energy, and that was academic work, not hand work, games, or art, but reading, writing, and arithmetic, and, for security, a decent, stable home and reasonable discipline. The third category consisted of unstable children who could not adapt easily to circumstances. These children should be encouraged to express their thoughts and discuss their validity with the physician. In the case of the neurotic child something more was called for; there must be an understanding of the child's unconscious. In the child's unconscious there were many wishes which were the expression of needs. These came from the subconscious in the child. The aim of therapy was to release these repressed wishes. This could be done by means of play, and as such expression had hitherto been forbidden in the child's unconscious by authority, the psychiatrist might now represent authority which did not forbid but encouraged such expression. This use of symbols in interpretation was almost an analytical procedure, but most of the psycho-analytical school believed that the material represented in symbolic play was sexual, whereas he did not think this was necessarily true. The results of play therapy were very interesting and sometimes dramatic.

The Psychopathic Child

The last class consisted of the mental defective and the psychotic. In this group of children a large amount of research remained to be done. The mental defective pure
and simple he considered very rare. The condition was often found plus distortion, plus psychosis or psychoneurosis. It was a mistake to write off these children as just defective. Even in defectives and psychotics there was room for a great deal of treatment. As for delinquents, he examined last year over 1,700 who had been brought before London courts. Incidentally he found a case of kleptomania (Dr. Miller had said the same thing). These children were slightly dull, but not markedly so. In all of them there was an aggressiveness and a resistance to authority which went back in many cases to the disturbed marital conditions in their homes.

Dr. W. G. WYLLIE referred to a group of children aged from about 9 to 14 who were unable to read or write, suffering from a kind of word-blindness, and were therefore kept down by an exasperated teacher or regarded as mentally deficient, yet on an intelligence test by a competent psychologist they came out 100 per cent. At present such children had just to trust to the luck of their parents, not knowing what to do with them, would bring them for medical advice. Dr. C. F. HARRIS underlined parental lack of discipline. It would be a mistake to make a clinical entity of difficult children; many of them were human beings with abnormal circumstances. Dr. R. A. YOUNG also emphasized parental control. The pendulum was beginning to swing back, and the next generation might well be more severely brought up. Dr. JAMES said that the question was really that of the difficult parent. He had got into the habit of talking about the parent rather than the child. The sense of economic security in the home had an effect on the mentality of the children. Dr. D. W. WINNICOTT said that in the case of delinquent children lack of parental love was a very important factor. Something might be traced back to lack of love of the unwashed infant. In his own out-patient department he did not find much serious mismanagement by parents. He wished there were more people trained to deal not with parents, but with children.

Dr. REGINALD MILLER asked what was Dr. Moodie's experience of children brought up in the artificial environment of flats; also whether much nervous disorder or behaviour trouble was found among children of divorcees. Dr. MOODIE replied that he thought more depended on the parent than on the type of dwelling, but of course it was one thing for a child to live in a flat near a park and another to live in a flat with nothing to open windows to.

At one school he was accustomed to see a number of children who had come from broken homes, and he had observed among them a marked feeling of insecurity, but under the conditions of the residential school they settled down quite well. One analyst in France, faced with the problem of the difficult child, analysed the parent, and sent the child to a boarding school—kept by his wife!

ACUTE FRONTAL SINUSITIS

At the meeting of the Section of Laryngology of the Royal Society of Medicine on December 6th, with Mr. Lionel Carter in the chair, a discussion took place on acute frontal sinusitis.

Classification and Clarification

Mr. F. Holt DIDDLE, in opening, spoke of the need for some clarification of the merits and demerits of the various methods of treatment and their appropriate use. If conservative measures were unduly prolonged serious complications might develop; on the other hand, too precipitate surgery was often equally disastrous. He classified acute frontal sinusitis into: (1) pyrexial types, with temperature 100° to 104° F. and severe toxemia, and (2) apyrexial, including so-called subacute types, with temperature up to 100.5° F. Bi淨er infections might be associated with a homolateral antritis, with or without oedema of the soft parts. Pyrexia was the all-important factor in determining treatment. In his series of cases 40 per cent, recovered completely by conservative measures alone, but all these were of the apyrexial or subacute type. In pyrexial types there was need for prompt treatment, by serum therapy, of the blood infection, as well as local measures. He was still old-fashioned enough to prefer the polyvalent anti-streptococcal serum given into the flank in large doses, up to 40, 60, or 80 c.c.m. He went on to discuss the indications for surgical drainage in the two groups, and the risks attending hasty surgery in the pyrexial types. In the apyrexial types intranasal drainage was relatively safe. He placed no great reliance on anterior middle turbinectomy; usually it was best combined with ethmoidectomy with intranasal drainage. The pyrexial groups presented the more difficult problem, and there was any form of high intranasal surgery. Simple external drainage was of value, even when oedema was not present. Needless risk was involved in oblitative operations. He advised non-interference with the ethmoid in the pyrexial types. In treating associated maxillary sinusitis aspiration facilitated frontal drainage, but not post-nasal surgery. In all cases he laid great stress on the need for repeated aspirations. In the pyrexial group he relied more on repeated aspirations if there was a response to conservative treatment.

Mr. T. E. CAWTHORNE said that it was important, in dealing with frontal sinusitis, to avoid extraneous procedures during the acute stage. Neglect of this rule would subject the patient to a risk of spreading osteomyelitis, meningitis, or even cavernous sinus thrombosis. The majority of cases would respond to conservative treatment, and any extensive intranasal surgery was to be avoided. Treatment of infection in the hard uncompromising sinus was important, as it was uncommon to find acute frontal sinusitis without an ethmoidal cell or an antrum full of pus. Conservative treatment should be directed towards the clearing up of these latter sinuses in order that natural drainage from the frontal sinus might be facilitated. External operations such as ethmoidectomy and ethmoidal cell drainage might be considered if there was evidence of extension of pus into surrounding tissues, or when there had been an inadequate response to at least ten days' conservative treatment. He likened precipitate surgery in the early stages of acute frontal sinusitis to pressing the trigger of a gun to see whether it was loaded. Many serious complications which occurred were the result of untimely operative intervention.

Conservative Treatment

Mr. Walter HOWARTH said that he found himself very much in sympathy with Mr. Cawthorne in his strenuous advocacy of a more conservative line of treatment than that of which he spoke. He had a right to say that Mr. Holt Diggle's figure of 40 per cent. of cases recovered as a result of conservative measures alone was very much too low; it ought to be something like 80 per cent. In his clinic a considerable number of cases of frontal sinuses were seen, but none or very few were operated upon. He felt that with the removal of the anterior end of the middle turbinate, though he thought some attempt should be made, where blockage was complete, to enter the frontal nasal duct. With regard to external operation, when such was necessary—"and it was necessary only in a very few cases, because every case, with marked oedema in the ethmoids of the cyclical type, settle down under conservative treatment—this should be as limited as possible, just an incision to let out the pus, and later, when the toxic condition had settled down, some further manipulation might be undertaken.

Mr. C. A. S. RIDOUT also valued the value of conservative prolongation. Nevertheless, there were cases of marked obstruction in which it was necessary to do something further, but as little as possible should be done. He had seen a case years ago in which, as a result of removing the anterior end of the middle turbinate and passing a rasp into the frontal sinus, a fatal meningitis was set up.

Mr. Harold KYLCH was pleased to note such a feeling of conservatism with regard to the frontal sinus area. He had looked up the records of treatment by the surgeons of the Central London Throat, Nose and Ear Hospital, and he could not find a single case of simple
sinusitis which was submitted to operation. The routine treatment seemed to have been lavage of the antrum; he believed that in the vast majority of cases of frontal sinusitis suppuration in the antrum occurred, and lavage of this cavity was of very great importance. The case was rather different with chronic frontal sinusitis, which would never be cured by washing out the antrum. A certain number of acute cases, however, would yield to that procedure. With regard to serum treatment, in haemolytic streptococcal infections he had found lactalbumin of considerable use.

Mr. T. HOWARD WOODMAN said that his own conservatism was of even deeper dye than that of previous speakers. Nowadays he did not even wash out the antrum. He had long ago given up the removal of the front end of the middle turbinate. Surgical intervention was advisable in acute infections only when there was threatened spread to some vital organ and its complications. Even then case would recover if left alone, but it was quite false to suppose that because one case required more radical measures there must be intervention in every case. Lister had said that inflammation tended to get well of itself if the cause of the irritation were removed; and a present-day surgeon, Mr. Wilfred Trotter, had remarked that a microbe could not be killed with the knife. Anatomically there was no such thing as frontal sinusitis. The frontal sinus was merely one of a group of anterior ethmoidal cells all of which, in their development, grew up towards the angle where the cranial cavity, the nasal cavity and the maxillary sinus met. One of these went a little further and received the name of the frontal sinus, but probably all the other cells were also involved. He believed that the maxillary sinus was also always inflamed, even if pus could not be found in it.

Radiotherapy in Treatment

Dr. W. A. TROOP pleaded for a wider use of radiotherapeutic methods in the treatment of acute sinusitis. These were widely used in America and on the Continent, but in this country their claims in this connexion had scarcely been investigated. The treatment should only be carried out by physicians who had a working knowledge of the disease process and its complications, and might well be relegated to a masseur or sister in a hospital. The treatment might consist of infra-red radiation locally, ultra-violet post-nasally, general ultra-violet radiation in suitable cases, and in a certain number of selected cases short-wave therapy. Short-wave therapy might in certain cases give rise to secondary toxic symptoms. The radiations produced relief of pain, and helped to establish drainage unless gross obstruction was present.

Mr. HAROLD DONWNER described a case which he showed to the meeting, of a man aged 29 admitted to hospital with a large frontal swelling and slightly raised temperature, in which operation was performed. Hamman tubes were inserted into each frontal sinus, and the patient was discharged nine days later much better. The tubes were removed after some five weeks, but unfortunately drainage was not satisfactory and first the right tube and afterwards the left had to be reinserted. Since then convalescence had been uninterrupted. The pus in this case, on culture, grew pneumococci, and there was a perforation of the bone over the anterior wall of the left frontal sinus.

Mr. E. D. D. DAVIS said that there were cases in which one's hand was forced in the direction of intervention, as, for example, where there was excessive pain. The history of a previous attack always made him a little more anxious. He did not see why a limited middle turbinate should not be done. There were cases in which a timely operation did help considerably, and yet other cases in which one was forced to operate. Mr. V. E. NUGUS said that he had been taught by Sir StClair Thomson that lavage of the antrum was an admirable thing. One of its advantages was that it cleared the natural ostium. By re-establishing the natural opening with ciliary drainage there was a chance for the condition to cure itself. Mr. E. J. G. GLASS described a case within his experience, and Mr. J. B. HORGAN mentioned the stringent and prolonged effect of using 1 grain of ephedrine with 17 grains of cocaine in 1 ounce of olive oil, warm, for dropping in the nose.

THE MEDICAL WITNESS

The West London Medico-Chirurgical Society, under the chairmanship of Dr. BERNARD MYERS, president, held a meeting on December 6th to discuss the question of the medical witness.

Sir BERNARD SPIESBURY said that the chief handicap of the medical man in the witness-box was that medicine was not an exact science. Legal people did not understand its imperfections, and expected the medical witness to be definite and positive. The limitations of the medical man's knowledge constantly tempted him to speculation, and he suffered from the difficulty of interpreting medical facts, especially in clinical work. Variation in opinion between expert witnesses who were merely dealing with facts observed by others was not surprising that direct witnesses to fact commonly differed widely, as could be seen in any running-down case. Many medical witnesses were hampered by their temperament: some could not discipline their minds to critical and pre-judiced consideration; others were nervous, shy, or suspicious, or unwilling to admit their lack of knowledge. Medical men carrying out necropsies should be given time to make certain of their facts and to consider their conclusions carefully; they should write down minor points as well as make the usual short notes, for details were easily forgotten. They should also take time to review findings, consult authorities, and discuss the matter with their colleagues. An expert witness should consider the weaknesses of the case, of which he should warn counsel. Sir Bernard cautioned witnesses against proximity, indiscreetness, the use of jargon and superlatives, exaggeration, bias, and loss of temper.

Dr. EDWIN SMITH pointed out that, while a medical man could avoid doing special work for which he did not feel himself fitted, such as ear, nose, and throat operations, he could never escape giving evidence. For this reason Dr. Smith advised medical students to visit the courts and study the problems of the witness. Medical men should keep a written note of every case which had a medico-legal bearing, in such a form that it could be produced in court. He advised obedience to all subpoenas and summonses, however irregularly served—even over the telephone. A doctor who was asked by solicitors to give expert evidence should insist on a written promise to pay a definite sum in advance. It was worth while to learn how to conduct a necropsy well. In dealing with dead bodies a doctor could often identify witnesses much time and expense by making careful measurements and noting distinguishing marks.

The Legal Point of View

JUDGE HIGGINS said that the first quality the court desired of the witness was plain language. A large number of medical witnesses who came before him tried to explain injuries in the most abstruse Greek terms. What, he asked, did the legal profession demand? A registrar in the county court had once asked him if £25 were sufficient compensation for a fractured pelvis, imagining this to be "the little bone in the leg." He wished all medical witnesses, especially when speaking about a bone, would point to where it was and explain what its function was. When choosing between the
opinion of a panel doctor who knew the case intimately and an expert who had only seen it two or three times. He was inclined to adopt the opinion of the expert, as he was more likely to have kept himself up to date, and especially as, after a few questions in cross-examination, he often came completely into line with the panel doctor. Mr. M'Adam declared that a witness who was paid to give evidence by one side or the other must be subconsciously biased.

Sir William Willcox said that the medical man gave evidence on the side of truth and justice. He should make up his mind to give his complete knowledge and opinion without any bias. The doctor was in court to speak the truth, the lawyer to put forward his client's case. Public knowledge of medical terms was much wider than it had been a few years ago, and the judge often asked for the technical term. He especially warned the witness against giving a medical lecture, remarking that a clever counsel would have the opportunity of selecting and twisting any part of it. The doctor should avoid trying to be humorous, or the judge got jealous and the jury thought the witness was not being very dignified. The teaching of psychology had unconsciously influenced judges and counsel and directed their attention to motives of accused persons and in witnesses. A medical man who had this fact in mind would be prepared for many questions which might otherwise have surprised him. If he remembered that it was counsel's job to support one aspect of the case he would not get too excited or impatient.

Mr. W. M'Adam Eccles observed that medical witnesses made extraordinary mistakes through forgetting their anatomy.

UNILATERAL MENSTRUAL PAIN

The November meeting of the North of England Obstetrical and Gynaecological Society was held in the University, Sheffield, and Professor Miles Phillips (Sheffield) gave a note on unilateral menstrual pain.

He said that this term, although somewhat clumsy, was the best that he could devise for a certain clinical group of cases in which severe pelvic-abdominal pain occurred solely in association with the menstrual periods, and only always on one and the same side. Two principal conditions were liable to cause pain of this nature—namely, localized cornual adenomyoma and haematometra in the rudimentary horn of a double uterus. Careful and understanding analysis of the patient's symptoms led one to make a provisional diagnosis sufficiently correct to justify an exploratory operation. Professor Phillips described in detail a number of cases in which the main symptom was pain of a fairly severe nature occurring just at the onset of menstruation. At laparotomy typical adenomyomata were found in the uterus; they were excised with complete relief of the symptoms. The speaker then referred to a series of cases of haematometra in the rudimentary horn of a double uterus. This most commonly occurred on the right side, and led to an erroneous diagnosis of appendicitis. After appendicectomy the symptoms persisted, and were only alleviated by removal of the rudimentary horn later.

Dr. J. W. Bride (Manchester) described the case of a calcified foetus with a rudimentary horn. The patient's main symptom was dysmenorrhoea. Professor A. Leyland Robinson (Liverpool) said that in his opinion these cases were characterized by the fact that there was no variation in the menstrual pain, perhaps with the exception of that pain which got progressively worse. Professor Dougal, Mr. Stacey, and Mr. Glyn Davies mentioned that they had also come across cases of dysmenorrhoea with causes similar to that described by Professor Phillips.

Chorio-angiobromatosis

Dr. C. H. Walsh (Liverpool) described a case of this condition, and said that solid tumours of the placenta were extremely rare. They were of pathological interest, and clinically might be associated with abnormal states of pregnancy and difficulties in labour. The specimen shown was obtained from a patient after delivery of her second child. The tumour of the placenta could be felt, in the early stages of labour, through the external os. The labour was normal, and the puerperium uneventful. The placenta with its two tumours weighed 2 lbs. One tumour was the size of a grape-fruit and the other the size of a cucumber. They were embedded in placental tissue, and there was a definite pseudo-capsule. The placental tissue did not infiltrate the tumours, which could be shelled out easily. The cut surface was solid and looked like a soft fibroid. Microscopically, they were found to consist of fibrous tissue with oval-shaped cells. In the surrounding blood-filled capillaries. The speaker thought that the nature of the tumours was angiofibromatosis.

Advanced Ectopic Pregnancy

Three cases of advanced ectopic pregnancy were reported.

Dr. N. L. Edwards (Derby) described the case of a 38-year-old woman aged 42, who passed through the rectum portions of the foetus, which was subsequently found to be lying in an extrauterine sac.

Mr. Glyn Davies (Sheffield) stated that his patient, 28 years old, was a 2-gravida. Her last menstrual period had occurred twenty-three weeks before he saw her, and several x-ray examinations showed that the foetus was present. Since the pregnancy was not thought to be intrauterine, an attempt was made to induce labour. Subsequent examination under anaesthesia led to the diagnosis of ectopic gestation. At the operation there was found a right-sided ovarian pregnancy, advanced to about the thirtieth week.

Professor A. M. Clave (Leeds) described the case of a primigravida, aged 25, who had complained of abdominal pain for the previous three months. There had been some haemorrhage on several occasions, preceded by amenorrhoea months before. The patient could feel foetal movements. When seen in September, 1934, the case was diagnosed as missed abortion. Attempts were made to induce labour. Subsequent examination under anaesthesia and a radiography led to a diagnosis of ectopic gestation. At the operation the amniotic sac was found among the intestines from which the matted foetus was removed. The placental site was in the neighbourhood of the left Fallopian tube, and the placenta and most of the sac were removed. Haemorrhage was not excessive. Convalescence was uninterrupted. The points of interest were: the diagnosis, which was not reached for a very long time in this case, and the treatment at operation.

The President remarked how extraordinary it was that three of these specimens should be shown at one meeting. In cases where the condition was not diagnosed until some time after viability, he wondered whether the operation could be delayed in order to obtain blood-filled capillaries. J. W. Bride (Manchester) said that he had found it a difficult condition to diagnose. He thought it safer to leave the placenta in situ when operating on these cases. Professor Miles Phillips (Sheffield) had seen six cases of advanced ectopic pregnancy. On three occasions he had left the placenta behind, and had no trouble subsequently.

Mr. J. St. George Wilson (Liverpool) mentioned a case which he first saw half-way through the pregnancy. He opened the abdomen at term and found the foetus in the broad ligament. He was able to deliver a live infant, and left the placenta in the abdomen. At a subsequent operation he had occasion to reopen the abdomen and found no sign of the placenta. Professor D. Dougal (Manchester) referred to a case in which bougies were introduced and passed through the fundus of the uterus. An abdominal operation had to be performed on one containing the placenta together with the uterus were removed.

Vesical Calculus with Pregnancy

Dr. J. W. Bride (Manchester) showed a stone removed from the bladder by suprapubic cystotomy. This weighed four ounces and measured 6 cm. in length by 6 cm. in breadth. Its presence in the bladder was first noticed when an x-ray photograph was taken during the last week of pregnancy. A vesical section was performed since the stone was felt below the presenting part and could not be pushed up out of the pelvis, and because it
was feared that grave damage to the bladder might result if labour were allowed to continue. The speaker referred to interesting cases from the literature of stone in the bladder complicating pregnancy.

CLINICAL PHOTOGRAPHY

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, on November 1st, Mr. T. A. Boucher-Hayes demonstrated a new type of clinical photography. Cases were photographed in the ordinary way and the resulting negative was enlarged on to an x-ray film. The photography of post-mortem specimens, particularly brains, was much simplified, and even vessel walls of the cut surface of the brain there was no need to use a filter; artificial light made an ideal photographic illumination. Excessive high lights might be dealt with by removing the effacing surface of the negative. The dark-room procedure was the same as for developing x-ray negatives. By this method a permanent, light, and easily filed record was available, needing for demonstration only an x-ray viewing-box. Photographs were shown of sarcoma of the scalp, guma of the scalp, rodent ulcer, naevi, lupus of the face, carcinoma of the tongue, goitres, tumours of the breast, and diseases of the penis and scrotum.

Mr. J. J. Murphy, radiographer to the Richmond Hospital, who was responsible for the technique of the method, said that the photographs of soft specimens were taken directly on a plain x-ray film, and that these films were developed. It was possible to increase the high lights considerably; if they went too bright, it was possible to scrape off some of the surface of the film. No light filter at all was required. It was possible to use an x-ray tank and developer, and so it was not necessary to disturb the dark room so much as if a panchromatic developer was employed. When enlarging, it was necessary to have a background which would not reflect light. The films cost exactly the same as an x-ray film, and the expense of the procedure approximated to that of making a lantern slide.

PYOTHORAX

At a meeting of the Devon and Exeter Medico-Chirurgical Society on November 21st, with the president, Dr. F. N. Sidebotham, in the chair, Dr. C. J. Fuller read notes on a case of pyothorax in which he had been associated with Mr. A. A. Gairdner. The patient, a man aged 24, was admitted to hospital on March 9th with a condition of right pyothorax. There was a history of "influenza" five weeks previously, and the possibility of pulmonary tuberculosis had been suggested. On March 13th Mr. Gairdner had performed rib resection, and established open drainage. In response to this the lung partially expanded. On March 29th, no further progress having been attained, Mr. Gairdner exposed the cavity and performed decortication of the right lung, the pleura being stripped over the affected area. By September the cavity had reduced to about 4 by 5 by 3/4 in., and a subtotal thoracoplasty was carried out in a subsequent operation. The case had proved to be a pneumococcal infection, but the delay in diagnosis and admission to hospital had caused structural complications which could only be overcome by the means adopted in this instance. The patient was present at the meeting. He was now in good general condition, and was making an excellent convalescence. Radiographs demonstrating the various features from the patient’s admission to hospital until some time after the final operation were also shown.

Mr. Norman Capener remarked on the difficulties met with in correcting the scoliosis associated with cases of this kind. Early cases would respond to exercises, but in those that came to operation late the adhesions often caused a considerable barrier. He congratulated Dr. Fuller and Mr. Gairdner on the fact that whereas in the earlier films scoliosis was definite the deformity could not be detected after the final resection.

At the November meeting of the Zoological Society of London Professor R. T. Leiper, supplementing the report previously made by him on the worm parasites of the okapi living in the Society’s Gardens, which had been based on the helminth eggs and larvae recognized during microscopic examination of the faeces, gave an account of the parasites collected at the subsequent post-mortem examination, and described the pathological lesions in the liver, which showed that the okapi had suffered from long-standing hepatic cirrhosis associated with a unique invasion of the bile ducts by numbers of the intestinal nematode *Monodontella giraffae*. There was also extensive parasitic infestation of the rumen and small intestine. About fifteen thousand parasitic worms were collected in typical examination of the contents of the alimentary canal. So far nineteen species have been identified, and belong to fifteen different genera. Of these, three have been previously recorded from the giraffe and five from domesticated animals.

CORRESPONDENCE

Risk of Explosion in Operating Theatres

Sir,—In connexion with the letter from Sir J. E. Petavel in your last issue, your readers may be interested to learn that the matter has for some time past received attention from the Anaesthetics Committee (Royal Society of Medicine and Medical Research Council). The committee has had the benefit of co-operation with the National Physical Laboratory as regards the electrical causation of the explosions. The committee has been able, largely owing to the investigations carried out for it by the late Professor B. H. Dixon, to point out to anaesthetists dangers which had not hitherto been particularly in connexion with the mixture of nitrous oxide with other vapours. As regards the determining cause of the explosion of an anaesthetic mixture, in practice this appears to arise in one of two ways, either from the electification of the table, etc., or from faulty electric apparatus, small lamps, suction machines, and so on. The anaesthetist has learned which of his agents to avoid in the presence of open flame, cautery, diathermy, etc. In the absence of these things he naturally expects to work without the risk of getting an electric shock or of having his apparatus blown to smithereens, whatever anaesthetic he chooses to employ. We may hope that the efforts of the National Physical Laboratory will result in this desired freedom.—I am, etc.,

J. Bloomfield,
London, W., Dec. 8th. Chairman, Anaesthetics Committee.

Sir Maurice Craig Memorial

Sir,—When Sir Maurice Craig, the distinguished psychiatrist, died in January last it was felt by his friends and colleagues that there should be some memorial of one who was a pioneer in the treatment of nervous and mental illnesses, and who contributed such invaluable knowledge to their early diagnosis and prevention. Sir Maurice was a great mental specialist, and with his name must be associated the importance now attached to rest and sleep in cases of nerve exhaustion, the use of small doses of a sedative over a long period, and to the toxic focus as a cause of certain severe mental disorders. He never failed to attach the correct value to the physical condition of his patients, and knew the relative value of the smallest symptoms. His whole life was one of consistent personal service, and his name will be linked with the prevention, and progress in treatment, of mental and nervous diseases. He was never happier than in "opening up the lives" of young people who in one way or another were being repressed or thwarted, or when highly strung
Large Vesical Calculus and Pregnancy.*

BY

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The accompanying photograph illustrates a specimen consisting
of a large vesical calculus and two smaller ones removed by
Mr. R. L. Newell at the Manchester Northern Hospital on
October 31st, 1935.

These stones were discovered by me in a patient nearing the
end of pregnancy and seemed likely to be a cause of dystocia,
or of possible danger to the bladder at the time of labour.

The patient, aged 40 years, was sent to me by Dr. Mather
of Todmorden on September 24th, 1934, when she was 36 weeks
pregnant, because of a history of previous difficult labours.
This history was that the first confinement had been a difficult
breech delivery, the child being stillborn; the second confine-
ment also a difficult breech delivery, the child being born alive,
and the third confinement a vertex presentation delivered alive
by instruments 10 years ago. The patient was a healthy
woman and her only complaint was of a feeling of pressure in
the suprapubic region. The external pelvic measurements were
normal and on vaginal examination the pelvis felt roomy and
I did not detect at that time any abnormal swellings. The vertex
was presenting in the left occipito-anterior position. The uterus
corresponded in size to 36 weeks of pregnancy and the child was
alive, the head being normal in size, and there was no dispro-
portion. The urine on ordinary testing did not show any
abnormal constituents and has never done so since.

Acting solely on the bad obstetric history, I decided to send
the patient for a radiographic examination of the pelvis.

* A specimen shown at the Sheffield Meeting of the North of England
Obstetrical and Gynaecological Society, November, 1935.

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Dr. R. S. Paterson reported as follows: "Vertex presentation. There is a large stone in the bladder the size of a hen's egg."

On October 8th, 1934, Dr. Mather informed me that the patient now began to complain of pain during and after micturition, and that she had a feeling of something pressing on the bladder, with increased frequency of micturition and loss of sleep. I made a vaginal examination and found that the head was fitting well into the pelvic brim, that the stone could be felt distinctly in the vagina below the head, and that it was impossible to push it up out of the pelvis. I came to the conclusion that grave damage to the bladder might result were labour allowed to commence, and so, on October 11th, I delivered, by Caesarean section through an incision as high as possible, a living male child weighing seven pounds. The puerperium was normal and the patient was discharged on the twentieth day. She was asked to return after the child was weaned for removal of the stone, but on account of her husband's death and family difficulties she was obliged to postpone her return until October 30th, 1935.

Since I last saw her the stone had not caused any inconvenience save for a feeling of weight, and the urine was perfectly clear. Mr. Newell performed suprapubic cystotomy on October 31st and, as there was some difficulty in delivering the stone, I suggested pushing it up from the vagina, a manœuvre which was very successful in removing it through the smallest possible space. The patient is now passing urine naturally, and the wound is healed.

These cases of large vesical calculi, as a probable cause of dystocia, are unusual. Munro Kerr says he has not known of any case occurring in the Glasgow Maternity Hospital, but states that Hugenberger in his monograph on the subject, written in 1875, collected 23 cases, in many of which great injury occurred, while sometimes the stone was removed during labour or pushed out of the way.

Smellie relates a case of a large vesical calculus discharged during labour. It was communicated to him by Mr. Archdeacon, a surgeon at St. Neots, in a letter dated September 19th, 1747, and I think is sufficiently instructive and quaint to be quoted here in full:

"One Gibbs, the wife of a coal-porter in this place, had long complained of violent pain in the bladder with other symptoms of a stone; but met with little compassion, because suspected of idleness, rather than of having any real disorder. She after-
wards proved with child, and endured great torment all the time of gestation, till she fell in labour, when the midwife being called, was surprised to find a hard body presenting before the head of the child. She did not know how to act on this occasion; but the patient's circumstances not permitting her to employ a male practitioner, patience was the only remedy she had to support her through a long and painful labour. At last the midwife felt something come away and, upon examination, found it was a stone of the shape and size of a goose's gizzard, weighing five or six ounces, which she afterwards gave to Dr. Waller of Cambridge. The child followed immediately after it was discharged and proved to be a boy, who is now a blacksmith in London, about 28 or 30 years of age. The woman recovered very well, but was troubled with an involuntary emission of urine; she afterwards bore a daughter, and lived several years, until she was shot by accident at a gentleman's house in this town."

I had a case under my care in St. Mary's Hospitals, Manchester, in April 1934, admitted as an urgency on account of incontinence of urine at the seventh month of pregnancy. She gave a history of three full time normal labours. The urine was running continuously from the urethra and was foul-smelling and contained much pus. She was seven months' pregnant and, on passing a catheter, I found a large soft stone about the size of the present specimen. Suprapubic cystotomy was performed by Mr. Macalpine, and a large soft phosphatic stone deposited round a piece of slippery elm was removed. The latter had apparently been inserted into the wrong aperture in the earlier months of pregnancy in an attempt at abortion, although information was not obtained from the patient on that score. She was delivered of a stillborn premature child the day after operation and, by infection from the bladder, became a case of puerperal sepsis from which she eventually recovered. In summarizing the case illustrated I consider that the following points arise:

1. The importance in an apparently normal pregnancy, but with a bad obstetric history, of a radiographic examination.

2. A stone in the bladder being discovered, what is the best method of treatment at 36 weeks of pregnancy? (a) Vaginal cystotomy, while an easy operation to have been carried out in my case, might have resulted in a vesico-vaginal fistula unhealed when labour began. (b) Suprapubic cystotomy might have resulted in premature labour and possibly puerperal sepsis as in my second case of calculus. (c) Not to have taken any steps about the stone and to have allowed labour to proceed in the hope
of being able to push the stone up out of the way of the head, might have led to grave damage to the bladder, as in Smellie's case.

3. I conclude, therefore, that the method I adopted of performing Caesarean section near term and asking my colleague to remove the stone by cystotomy at a subsequent date is the best line of treatment. The result has justified it.

The large calculus weighs 112 grammes. The length is 6.5 cm., the breadth 6.0 cm., and the thickness 3.5 cm.

The calculus has been bisected and there is no foreign body at the core.

References.


TWO CASES OF SLIPPERY ELM BLADDER CALCULUS IN PREGNANCY

BY

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In both the cases reported below a piece of slippery elm bark, which had been used unsuccessfully to bring on an abortion, had passed into the bladder, and had remained there to form a stone while the pregnancy continued.

CASE REPORTS

Case 1. This patient, aged 29, was admitted to hospital on 29th September, 1951, in her second pregnancy at the 32nd week. There was a 2-months history of pain on micturition and difficulty in emptying the bladder. There had been retention on one occasion, and small stones had been passed. The urine was infected, and X-ray examination (Fig. 1) showed a bladder stone which had broken, and which was apparently surrounding a foreign body. Removal of the stone by the supra-pubic route was carried out, and it was found to be a large fragmented phosphatic one surrounding a piece of slippery elm. The bladder and space of Retzius were drained. A sulphonamide and antibiotics were given. The wound healed slowly, and 7 weeks later the patient was delivered normally of a healthy baby weighing 8 pounds 15 ounces. Six weeks after delivery she was free from urinary symptoms.

This patient was under the care of Mr. S. M. Reid, and was operated on by Mr. B. S. Cran, and I am indebted to them for permission to record it.

Case 2. This patient, aged 25, was admitted to hospital on 16th June, 1952, in her third pregnancy, when about 24-weeks pregnant, for treatment of a urinary infection. There was pain on micturition, together with haematuria and frequency. Her symptoms subsided with a course of sulphonamazine. Two months later she was re-admitted, as her symptoms had become so severe as to require morphia from her doctor. On vaginal examination a mass was felt in the anterior fornix, and X-rays (Fig. 2) showed a large foreign body calculus. After cystoscopy the calculus was removed by the supra-pubic route and the bladder and space of Retzius drained. The patient developed apnoea after the operation and various stimulants were given. Premature labour came on 24 hours after operation and the patient was delivered normally of a baby weighing 4 pounds 11 ounces which subsequently progressed well. The wound healed slowly and the patient went home after a fortnight. Later a small ventral hernia was repaired.

A similar case has been recorded by Farncombe (1935). The patient was in her seventh pregnancy and was admitted at the 34th week with a diagnosis of carcinoma of the bladder and vagina. There was a 6-months history of dysuria, incontinence and blood-stained vaginal discharge. Granulation tissue was present at the urinary meatus and a mass was felt on vaginal examination. An X-ray showed a cylindrical foreign body stone. The patient went into labour before the stone could be removed and was delivered normally of a healthy baby weighing 7 pounds. On the seventh day a stone measuring 4½ by 2½ inches was removed by the supra-pubic route and the bladder drained. Healing took place by the 14th day.

In addition to the 2 cases reported here I have now seen 3 others, and know of another 3, in which the same kind of foreign body entered the bladder. In 2 of these cases it was removed by vaginal cystotomy, in 2 by supra-pubic cystotomy, in the fifth it was removed directly through the urethra after dilatation, and in the sixth it was passed spontaneously after an unsuccessful attempt at removal with the operating cystoscope.

DISCUSSION

It is easy to overlook the possibility of this condition, as stone in the urinary tract is infrequent in pregnancy while infection is common. The patient will usually withhold the history of interference, as in both the present instances. The possibility of a stone being present, however, should always be considered if bladder symptoms are marked or urinary infection.
persistent. Once the diagnosis is suspected it can be confirmed with ease by bimanual examination, X-rays and cystoscopy.

Removal of the stone as soon as possible seems advisable, whatever the stage of pregnancy may be, both to relieve the great distress which these patients suffer and also to prevent trauma to the bladder in labour. Drainage of the bladder also seems indicated, even with our modern resources, owing to the gross infection usually present.

The withdrawal in some way from sale of slippery elm bark might now be considered, in view of its wide use as a supposed abortifacient. This would be no therapeutic loss, and at least the occurrence of the distressing complications reported here, which are by no means rare, would be prevented.

Reference

VESICAL CALCULUS AS A CAUSE OF LABOUR DYSTOCIA
Report of a Case


From The Government Women and Children's Hospital, Egmore, Madras, S. India

Reports of cases of calculus of the bladder obstructing labour are difficult to find in the literature, probably because this is an extremely rare phenomenon. Smellie has recorded a case of a large calculus which was forced out of the bladder during labour, resulting in a permanent fistula. In his monograph on the subject in 1875 Hugenberger referred to 23 cases. In many of them great injury occurred, while in others the tumour was removed during labour or pushed out of the way (quoted by Chassar Moir). McClintock refers to a case in which a large stone was removed from a woman seven months pregnant, without disturbing the pregnancy. Very few cases have been recorded in recent years but Bride¹,² reported one in which a vesical calculus was diagnosed accidentally on a prenatal X-ray. As it lay below the presenting part and could not be pushed above it, Caesarean section was performed, to avoid damage to the bladder during labour. Later the stone was removed; it weighed 4 oz. and measured 6.5 by 6 cm. The condition of vesical calculus obstructing labour is so rare that the following case appears to be worth recording.

Case Report
A 25-year-old patient, pregnant for the third time, was admitted to hospital in labour at 10.30 p.m., on August 31, 1957, as an emergency. Her pregnancy had been uneventful. According to her menstrual history she was at full term. Labour pains had begun a few hours earlier in the evening and the membranes had ruptured on the way to the hospital.

She had previously given birth normally to two children. She had experienced pain during micturition for the past three months and had passed blood-stained urine several times in the last month. She gave no history of any other symptoms such as frequency of micturition or fever with rigors. General examination of the patient showed no abnormality apart from a slight degree of avitaminosis as evidenced by angular stomatitis. There was no oedema of the feet. Her blood-pressure was within normal limits. Traces of albumin were present in the urine on ordinary examination. Obstetric examination showed the uterus to be full-term in size and contracting very vigorously. There was supra-pubic fullness due to a partly distended bladder. The foetus was longitudinal in lie, vertex in presentation and left occipito-anterior in position. The head was well fixed and almost engaged. The foetal heart was audible in the left lower quadrant of the abdomen. Vaginal examination showed the vulva to be healthy. The urethra was displaced anteriorly and was patulous. A tumour was present on the anterolateral aspect of the vulval orifice, lying between the pubic ramus and the foetal head. The tumour seemed to be within the anterior vaginal wall. The foetal
head was being driven down by strong pains against this tumour, which was bony hard in consistency and fixed. The membranes were absent; the cervix was fully dilated. The foetal head was in the left occipito-anterior position and below the ischial spines and visible between the labia (Fig. 1). There was no caput. Some amniotic fluid was draining but it was not stained with meconium. The pelvis seemed to be normal.

An attempt was made to catheterize the bladder with a metal catheter but when it was introduced it was deflected to the left side and would not enter the bladder. It grated against a hard object within the bladder. The cause of obstruction to labour was believed to be a vesical calculus. Because the head was so low in the pelvis and the pelvis was otherwise normal it was decided to effect delivery with the aid of forceps over a generous episiotomy. After suitable premedication with atropine the patient was given an anaesthetic. Under the effect of anaesthesia there was relaxation of the voluntary muscles of the abdominal wall. By pushing the head up slightly a catheter was easily introduced into the bladder. About 8 oz. of turbid urine were withdrawn. It was obvious on examination that this hard tumour was actually lying within the bladder and that it was freely mobile. However, it was not possible to push the calculus above the level of the foetal head. A right mediolateral episiotomy was made and a Milne-Murry forceps applied. A live but asphyxiated female child weighing 6 lb. 5 oz. was delivered. The child was easily revived. The third stage was normal. The placenta was healthy. The episiotomy wound was repaired.

The patient's convalescence was complicated only by slight puerperal pyrexia and acute retention of urine which proved a little troublesome. The pyrexia responded to the exhibition of antibiotics. Periodical catheterization finally overcame the retention of urine.

An X-ray taken in the post-natal period confirmed the presence of a large ovoid calculus in the pelvis which showed the typical laminated structure of a phosphate stone (Fig. 2). There was also evidence of wide separation of the pubic symphysis. As there was no clinical evidence of any injury, it was thought that this diastasis of the pubic symphysis could be accepted as being within normal physiological limits for pregnancy. When she had fully recovered from the effects of childbirth the patient was advised to have the stone removed, a suggestion which she politely and firmly declined and later emphasized by taking her own discharge from the hospital abruptly one day.

**Comment**

Vesical calculus is an extremely rare complication of pregnancy. Although urinary tract sepsis is so common it is strange that calculus formation should be rare. Even when a calculus forms it must indeed be exceptionally rare for a vesical calculus to reach such a size as to make delivery difficult. In this case the calculus was of appreciable size. In view of the vigorous uterine contractions it is probable that if the patient had neglected herself further the calculus might have been finally expelled from the bladder through the vagina in advance of the foetal head. This patient would then have been left with a permanent fistula like the one reported by Smellie. The diagnosis of calculus as the cause of labour dystocia is not very difficult to make. A preceding history of urinary symptoms, the characteristic position and consistency of the tumour and its presence within the bladder are all helpful signs. The last sign may be easily confirmed by introducing a metal catheter into the bladder. When the calculus has become firmly wedged in between the pubic bone and the foetal head it can simulate a bony neoplasm of the former. However, with a careful examination under anaesthesia this mistake need not be made. If the calculus is very large and the head has not descended it would seem justifiable to deliver the child by Caesarean section, thus avoiding the risk of damage to the bladder. However, when the head is well down in a pelvis which is of generous proportions there can be little harm in attempting the delivery with the aid of forceps, provided a generous episiotomy is made.

There is little dispute that any stone in the bladder requires to be removed, but the ideal time for its removal is a matter for controversy. A stone could be removed by vaginal cystotomy or later by supra-pubic cystotomy. In the case of small stones there may be a place for crushing them and removing them with a lithotrite, but small stones rarely complicate labour.

**Addendum**

This patient has again been admitted in
advanced labour obstructed by a vesical calculus. A vaginal cystolithotomy was performed and a live child delivered by forceps. Recovery was uneventful.

Acknowledgments
I wish to acknowledge my gratitude to Dr. S. Abraham, Professor of Obstetrics and Gynaecology, Madras University, and Superintendent, The Government Women and Children’s Hospital, Egmore, Madras, for her generous consent to my making use of clinical material from the hospital.

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OBSTRUCTED LABOUR DUE TO VESICAL CALCULUS

BY

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Owing to the shape and structure of the female urethra vesical calculus is comparatively rare in women and as a corollary even rarer in association with pregnancy. William Heberden (1765) gives an account of a stone voided without help from the bladder of a woman at Bury. She was sixty-seven years old and had been seriously afflicted with symptoms of the stone for twelve years and for many years had been unable to sit on a seat. On Monday, 11th February, 1765 she voided a stone 3\(\frac{1}{4}\) inches long and 4\(\frac{1}{2}\) inches in its narrowest diameter following which she was able to sit on a seat without uneasiness.

Thomas Bryant (1864) stated that stones 7\(\frac{1}{2}\) inches by 5\(\frac{1}{2}\) inches and up to 4 ounces in weight could be passed spontaneously without gross subsequent incontinence.

Stones of these considerable proportions do not appear to have been described in modern literature and the last major paper on vesical calculus in association with pregnancy was written by T. Hugenberger in 1875.

He described three personal cases, one in Moscow and two in St. Petersburg, out of 25,000 deliveries, and reviewed the European literature from the seventeenth century. This revealed twenty-three other cases which he classified into four groups.

The first group comprised 4 cases diagnosed during pregnancy and in which the stones were removed before labour, one by urethral dilatation, two by vaginal cystotomy and one in which the operation was not described.

The second group comprised 7 cases in which spontaneous delivery took place with the stone in situ, and in five of these there was subsequent incontinence.

The third group comprised 7 cases in which forcible delivery was effected to overcome obstruction due to stone followed in each case by a large fistula.

The fourth group comprised 4 cases in which operation for stone in four and displacement of the stone in one was carried out during labour to relieve obstruction and followed by spontaneous delivery.

His own 3 cases were managed by displacement of the stone in one, followed by forceps delivery and vaginal cystotomy, in the other two followed by spontaneous delivery. The last 2 had gross chronic urinary tract infection which became acute following delivery and resulted in death in both cases.

Farncombe (1935) described a case in which a seven-pound baby was delivered normally in the presence of a vesical calculus that measured 4\(\frac{1}{2}\) inches by 2\(\frac{1}{2}\) inches. The calculus was removed on the seventh day by suprapubic cystotomy and healing took place by the 14th day.

Bride (1935) described a case in which Caesarean section was performed at 36 weeks and the calculus removed by operation at a later date.

Williams (1954) described 2 cases of slippery elm bladder calculus in which the stone was removed during pregnancy by suprapubic cystotomy and followed subsequently by normal labour and spontaneous delivery. In one of the cases labour came on prematurely 24 hours after operation.
FIG. 1
The following case appears unique in that lower segment Caesarean section was followed immediately by suprapubic cystotomy for removal of a stone that had obstructed labour.

The patient, aged 35 years, booked for home delivery, had had a previous normal confinement of a baby weighing 6 pounds 9 ounces. She was referred for opinion on 13th February, 1956 when 37-weeks pregnant because of intractable frequency and dysuria. She was thin, tense, pale and bronchitic. The uterus corresponded with the dates, the baby was presenting by the vertex which was free and could not be made to fully engage.

A tentative diagnosis of vesical calculus was made but was not confirmed clinically as the patient refused vaginal examination. X-ray was arranged (Figs. 1 and 2) and, as the patient furthermore refused immediate admission, she was booked for confinement and given an appointment to attend the following week.

Six days later, on the 19th February, 1956, she was admitted with obstructed labour. The membranes had been ruptured for 48 hours. She had had strong labour for 12 hours. The cervix was fully dilated. The bladder, containing a large stone, had been pushed down in front of the head and was presenting in a cystocele at the vulva. The foetus was dead and the liquor offensive and of pea-soup colour and consistency.

An immediate lower segment Caesarean section was performed under general anaesthetic. The uterus, vesico-vaginal and abdominal peritoneum, were closed over penicillin sulphonamide powder and the bladder opened by a suprapubic incision. A large stone (Fig. 3), with a hard core and many crumbling outer layers which was impacted in the bladder neck and walls, was removed along with a considerable amount of phosphatic debris. Innumerable particles were embedded in the bladder mucosa and could not be mopped off. The stone did not contain a foreign body nucleus.

In view of the infection and trauma the bladder was drained suprapublically through a Depezer catheter and trans-urethrally by means of a simple rubber catheter. A small rubber drain was inserted into the Cave of Retzius. Intravenous glucose saline was given for 24 hours, six-hourly bladder irrigations were carried out and streptomycin 1 g. daily prescribed for 7 days. Breathing, arm and leg exercises were instituted within twelve hours of the operation.

There was satisfactory progress for 48 hours but on 21st February, 1956 the patient suddenly collapsed with cyanosis and laboured breathing. A diagnosis of pulmonary embolism was made and subsequently confirmed by X-ray.

Aminophylline 0·25 g. and Coramine 2 ml. were given intravenously, morphia ½ g. sub-cutaneously, and continuous oxygen by B.L.B. mask. Anticoagulants were withheld. The aminophylline was repeated 6-hourly during the next 24 hours, during which time oxygen had to be given almost continuously. The following day the patient was greatly improved but she became disorientated on the 23rd February, 1956, i.e., 48 hours after the embolism and on the fourth post-operative day and developed paranoid delusions, heard men's voices under the bed, pulled out the catheters and leapt out. This was considered to be a toxic psychosis. Frenquel 40 mg. and Parentrovite 10 ml. were given intravenously and repeated twice daily. Paraldehyde 5 ml. was given intramuscularly and repeated as required. The psychosis continued for six days during which time management was difficult. Bladder drainage was effected most of the time however by a trans-urethral simple catheter. Progress was subsequently uneventful but she was not dry until the 29th post-operative day.

The patient failed to attend the postnatal clinic and was not seen again until the 25th September, 1959 when she was 32-weeks pregnant. The pregnancy was normal, there were no urinary symptoms, no urinary tract infection, and no calculi. She was booked for hospital confinement and had a normal delivery of a healthy living girl that weighed 7 pounds 12 ounces.

DISCUSSION

The treatment of vesical calculus in association with pregnancy depends upon the size and situation of the stone and whether or not the patient is in labour.
A stone discovered during pregnancy is best removed by lithotripsy if small and by supra-pubic cystotomy if large, in which case it would be best done after the thirty-sixth week because of the possibility of premature labour. Subsequent vaginal delivery can be anticipated.

A stone discovered during labour can in favourable circumstances be displaced above the head and vaginal delivery awaited or effected, depending upon the station of the head and degree of cervical dilatation.

Once obstruction has occurred with associated bladder trauma, Caesarean section should be performed followed immediately by suprapubic cystotomy.

Vaginal cystotomy would be a simple operation in these cases but would seem to be contra-indicated in the presence of bruising and infection.

**Summary**

The literature of vesical calculus associated with pregnancy is reviewed and a case in which the calculus caused obstruction is described.

My thanks are due to Dr. Grahovac for assistance with translation.

**References**

OBSTRUCTED LABOUR CAUSED BY A VESICAL CALCULUS: CASE REPORT

F. J. van Coeverden de Groot, M.B., Ch.B. (Cape Town), Registrar, Department of Paediatrics, University of Cape Town

Obstructed labour is a well-known entity in maternity units, cephalo-pelvic disproportion being the most common cause. A rare example of obstructed labour is presented here, in which the cause was a large vesical calculus in a multigravid patient. As far as can be determined, this is apparently the first case of this nature to be recorded in South Africa and the sixteenth case to be recorded in the British and Continental literature.

Historical Aspect

The European literature from the 17th century onwards was reviewed by Hugenberger in 1875. A total of 23 cases of bladder calculi in pregnancy were collected, with obstructed labour occurring in 11 cases. He added another 3 cases, from his personal experience, where spontaneous vaginal deliveries resulted following manual displacement of the calculi.

Bride described a case in 1935 where the pregnancy was terminated by a caesarean section at the 36th week of pregnancy. The calculus was removed at a later date. Farncombe described another case in the same year where spontaneous vaginal delivery of a 7-lb. infant occurred in the presence of a bladder calculus. Williams (1945) reported 2 interesting cases where elm bark had been used early in pregnancy in an attempt to induce an abortion. (The elm bark had accidentally entered the bladder and had become the nucleus of a vesical calculus.) These calculi were removed during the pregnancies, both of which ended with a spontaneous vaginal delivery. Cope recorded a case in 1961 where a vesical calculus was removed through a suprapubic cystotomy at the time of performing a caesarean section for obstructed labour.

CASE REPORT

The patient, a 33-year-old Coloured female, was admitted in strong labour to the Provincial Hospital, Uitenhage, on the morning of 13 August 1962.

Previous Medical History

The patient had been admitted in 1957 for acute urinary retention. No abnormalities had been found on either abdominal or vaginal examination. A cystogram was done.

Report. The superior margin of the bladder is irregular on its right side where a small diverticulum is present (marked "A" in Fig. 1). There are no similar filling defects to suggest malignant involvement.

'Similar but less marked changes are seen in the regions indicated by arrows marked "C" and "B" in Fig. 1. These features could indicate chronic cystitis. No radiological evidence of malignancy.'

Present Obstetrical History


1959. Normal pregnancy. Labour commenced spontaneously at term. The patient was admitted 6 hours later. Abdominal palpation revealed that the presenting vertex had not yet entered the pelvis. On vaginal examination the cervix was found to be fully dilated, with a non-engaged vertex presenting. A hard mobile mass was palpable between the baby's head and the pubic symphysis. The mass was displaced manually after which the head descended into the pelvis. The infant was delivered with the aid of a Barnes forceps. The birth-weight was unfortunately not recorded.

Previous Obstetrical History

The patient had no antenatal care. She was admitted at term, 5 hours after the spontaneous onset of labour. Her membranes had ruptured.

Examination on Admission

General. The patient was of small stature and not distressed. Her blood pressure and temperature were normal. Cardiovascular, respiratory and central nervous systems were all found to be normal.

Abdominal Palpation. The uterus was enlarged to the size of a full-term pregnancy. The foetus was presenting by the vertex. The presenting part was not engaged. The foetal heart rate was regular at 144 per minute. The infant was estimated to be of average size.

Vaginal examination. An attempt at passing a catheter was unsuccessful. The vulva was oedematous. The state of cervical dilatation could not be properly assessed as a result of a hard mass bulging into the vagina through the anterior vaginal wall. This mass could not be displaced out of the pelvis. No bulging membranes were felt. The provisional diagnosis of a low-lying cervical fibroid was made.

Treatment. As a normal vaginal delivery was impossible, an emergency caesarean section was decided upon. At operation the cause of the obstruction was found to be a hard rounded mass within the bladder. It was the size of a small orange, mainly situated in the left half of the pelvis and extending into the left iliac fossa. No other abnormalities were found.

![Fig. 1. Cystogram done in 1957, showing filling irregularities, probably indicative of stone formation (marked A, B and C).](image-url)
routine lower-segment caesarean section was performed. A live healthy infant weighing 6 lb. 12½ oz. was delivered. The vesical calculus was left undisturbed. The postoperative course was uneventful. Spontaneous micturition was established soon after operation. An intravenous pyelogram was done before the patient was discharged.

**Radiological report.** 'A huge laminated stone is seen in the pelvis, consistent with a bladder stone. After injection of the dye, a right-sided hydronephrosis and hydrocalycosis as well as a hydronephrosis and hydrocalycosis of an ectopic left-sided kidney, overlying the left sacro-iliac joint is seen'. (Fig. 2.)

![Fig. 2: Intravenous pyelogram done in 1962 after caesarean section, showing a large laminated bladder stone, hydronephrosis and hydrocalycosis on the right side and similar changes in an ectopic kidney on the left (indicated with an arrow).](image)

Subsequent progress. The patient was re-admitted 2 months later for removal of the bladder stone. A large vesical calculus was removed. It was found to be lying in a wide-mouthed diverticulum on the left side. A tight fibrous stricture, probably congenital in origin, was present. The bladder neck was resected.

**Pathological report.** The specimen consists of an oval-shaped whitish calculus measuring approximately 5 cm. in its largest diameter (Fig. 3). Chemical analysis showed that the calculus consisted almost entirely of phosphates.

**DISCUSSION**

The case presented illustrates the progressive development of increasing obstruction in the vaginal delivery of 2 infants born in 2 subsequent pregnancies. This obstruction was caused by the presence of a vesical calculus which had gradually enlarged over a period of a few years. Apart from the 1 episode of acute urinary retention in 1957 there had been no further evidence of known pathology in the urinary tract until the delivery 2 years later, when a hard mass was discovered lying anterior to the vagina and preventing the engaging part from entering the pelvis. Vaginal delivery aided by a pair of Neville Barnes forceps was effected after the mass had been displaced upwards. The patient unfortunately failed to return subsequently for investigation of the mass. It is likely that the mass, now larger in size, was responsible for the obstructed labour of the present admission, for which a caesarean section was necessary. This case clearly illustrates the importance of medical supervision in general and of regular antenatal care in particular. Had this been done in the case under discussion a caesarean section would not have been necessary.

**SUMMARY**

A case of obstructed labour caused by a vesical calculus has been described. The stone had probably been present for at least 5 years, during which time the patient had been pregnant 3 times. The last pregnancy was terminated by an emergency caesarean section. The importance of general and antenatal care is stressed. This is apparently the first such case recorded in South Africa.

I am indebted to the late Prof. James T. Louw for his help and encouragement; Dr. Neville Fisher for urological investigations; Mr. B. Todt for the photographs and Dr. C. W. de W. Viviers, Superintendent of the Provincial Hospital, Uitenhage, for permission to publish this case.

**REFERENCES**

Obstructed labour due to a vesical calculus

A 25-year-old woman was admitted to a district hospital in obstructed labour. She had previously had four spontaneous vaginal deliveries. Her only complaint before the onset of this labour was of frequency of micturition during the last four weeks of pregnancy. A diagnosis of locked twins was made as apparently two heads were impacted in the pelvis. But a single, healthy baby (weight 3400 g) was delivered at lower segment caesarean section, and the second “head” was found to be a large vesical calculus.

Two days later the patient became incontinent of urine. She was referred to the Kilimanjaro Christian Medical Centre four weeks later for removal of the stone and repair of a suspected fistula. Vaginal examination revealed a large, hard mass lying within the bladder partially occluding the vaginal cavity and obscuring the cervix. Urine was pouring down the vagina but the fistula could not be seen. The only other abnormality was a left-sided foot drop. Corrective physiotherapy was started. Radiological examination confirmed an intravesical calculus and calcifications were seen in the left renal area. Haemoglobin was 8.9 g dl and blood urea 25 mmol l (15 mg 100 ml). Urine culture produced a heavy growth of Proteus vulgaris. Chet x-ray examination was normal. An intravenous pyelogram showed a right hydronephrosis and hydronephrotic. There was no excretion on the left side (figure).

At suprapubic cystotomy a phosphatic calculus 8 cm long, 6.5 cm wide, 6 cm thick was removed, weighing 130 g. The bladder was inflamed and ulcerated. A 1-cm fistula between the bladder and cervix was noted but no attempt was made to close it. The incision in the bladder was closed and continuous catheter drainage per urethram instituted. The patient was continent after removal of the catheter 16 days later and repeat pyelography showed normal function in the right kidney but still no function in the left. Cystoscopy four weeks later showed a healthy bladder mucosa but a stricture was found 4 cm up the left ureter. Exploration of the left loin found a shrunken, calcified kidney and ureterosigmoidectomy was performed. Histological examination confirmed renal tuberculosis. Antituberculosis therapy was started and the patient recovered uneventfully. When discharged three weeks later she was well and walking normally.

Comment

 Vesical calculi are uncommon in women and rare in pregnancy. Cope reviewed 30 cases, of which only five had been reported in the present century. Management varies according to the size and situation of the calculus and whether the patient is in labour. Small calculi can be removed by lithotripsy per urethram. Suprapubic cystotomy is the safest approach to a large calculus but it should be deferred until late in pregnancy to avoid precipitating premature labour. If the patient is first seen in labour it may be possible to displace the calculus above the presenting part and allow spontaneous vaginal delivery, but if this is difficult caesarean section should be performed and the calculus removed at the same time. Bride describes a case in which suprapubic cystotomy was performed three weeks later. Such delay is, however, unnecessary. Vaginal cystotomy is contraindicated in the presence of infection or bruising of the vaginal wall as a permanent fistula may result.

Multiple lesions should always be excluded, especially in the tropics. A non-functioning kidney is probably best removed. Continuous catheter drainage (for up to four weeks) of a fresh bladder fistula will diminish fibrosis and scarring and may result in complete healing, as in this case. Definitive repair should be delayed at least eight weeks from the causative injury or in the presence of active inflammation.

I thank Mr Ian Hulme-Moir and Dr E Kasareko for their advice and surgical assistance.


(Accepted 6 April 1977)

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Faulty T tube simulating retained common bile-duct stone

In postoperative T tube cholangiography the main diagnostic problem is to distinguish between retained stones and air bubbles, while occasionally oedema of the duct mucosa may cause difficulty. We report a case in which an irregularity on the surface of a T tube led to the false diagnosis of a retained stone.

Case report

A 22-year-old woman underwent cholecystectomy after episodes of biliary colic. She was found to have a dilated common bile duct, and several small filling defects were seen on the operative cholangiogram. The duct was explored via a supraduodenal choledochotomy, and three small stones were removed. A Manigot latex T tube was inserted after the exploration. During the insertion it was noted that the tube was rather sticky but no irregularities were seen on its surface. Postoperative progress was uneventful but T tube cholangiography showed a transectancy strongly suggestive of a small, non-opaque stone. The examination was repeated and the appearances were unchanged. Owing to the relatively small size of the transectancy, the composition of the other stones (mainly cholesterol), and the patient's age and disinclination to undergo further surgery, she was transferred to the care of Professor R H Dowling at Guy's Hospital for postoperative cholic acid infusion for dissolution of the stone. After further explanation of the procedure the patient was unwilling to remain in hospital, but agreed to return for attempted percutaneous extraction. She returned for this procedure six weeks after the original operation.

On removal of the T tube before attempted catheterisation of the track, a small blister-like excrescence was found on the cross limb of the T tube in the same position as the radiographic filling defect (see fig). A cholangio-
BLADDER CALCULUS WITH PREGNANCY
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ABSTRACT
A case is reported of a 42-year-old pregnant woman with an asymptomatic bladder calculus. Diagnosis and management are discussed, and the literature is reviewed.

Urinary calculi are uncommon during pregnancy and bladder calculi are even more rare. In a review of the European literature Cope noted only 30 incidences of bladder stones in association with pregnancy and presented 1 personal case. Since then 1 other patient has been described. A case is presented of a pregnant woman with a bladder calculus, which was found incidentally during radiological investigation of fetal maturity.

CASE REPORT
A 42-year-old pregnant woman, who had had 2 previous early abortions, 1 normal vaginal delivery and 2 cesarean deliveries for fetopelvic disproportion, presented to the antenatal clinic in response to a previous instruction that all future pregnancies must be managed in the hospital. The patient was well and had experienced no symptoms referable to the urinary tract.

The blood pressure was 110/70 mm. Hg and there was no peripheral edema. The size of the uterus was compatible with 28 weeks of gestation. Hemoglobin concentration was 10.9 gm./100 ml. The urine was clear and contained no albumin or sugar.

The patient was hospitalized 8 weeks later because of dracunculiasis of the right foot and anemia. Hemoglobin was 7.1 gm./100 ml., mean corpuscular hemoglobin concentration was 31 and packed cell volume was 23. Weight gain had remained within normal limits and the blood pressure had ranged between 110/70 and 120/70 mm. Hg. A repeat antenatal urinalysis had shown no abnormality except for a trace of albumin, on 1 occasion only, at the time of admission to the hospital.

After correction of the anemia with 2 units of blood and treatment of the dracunculiasis with a course of nitro-thiazolyl-imidazolidinone, a plain radiograph of the abdomen was taken to investigate fetal maturity. In addition to a fetus whose age was estimated at about 34 weeks, a large bladder calculus was seen (fig. 1, A). Subsequent urine examinations remained normal. A midstream urine specimen collected preoperatively was sterile. The pH was 5 and specific gravity was 1.016. The spun sediment contained 2 to 4 white cells per high power field but no casts or bacteria were noted. Examination of the sediment from a 24-hour urine collection (volume 1,110 ml.) yielded no eggs of Schistosoma haematobium. The blood urea was 28 mg./100 ml and serum creatinine was 1.0 mg./100 ml.

At about 38 weeks of gestation cystolithotomy and bilateral tubal ligation were performed at the time of repeat elective cesarean section. A healthy male newborn weighing 2.6 kg. was delivered. Inspection of the bladder at operation showed mild inflammation only and no diverticulum, bladder base calcification or any evidence of vesical schistosomiasis. The phosphatic calculus measured 4.7 × 4.2 cm. and weighed 127.5 gm. (fig. 1, B). It consisted of a hard, thin, outer coat and a large, firm chalky, inner layer. There was no foreign body nucleus.

Convalescence was uneventful and the patient was discharged from the hospital 20 days postoperatively. Urine culture was sterile, hemoglobin concentration was 10.7 gm./100 ml, blood urea was 34 mg./100 ml and serum creatinine was 1.3 gm./100 ml.

At the postnatal visit 10 weeks later the patient was asymptomatic and well. The blood pressure was 100/60 mm. Hg. Blood urea 36 mg./100 ml and serum creatinine 1.2 mg./100 ml. A midstream urine specimen contained no albumin and was sterile. A chest x-ray was normal. Excretory urography 3 months post partum showed a normal left kidney and a small pyelonephritic right kidney but no evidence of obstruction in the line of the ureter (fig. 2). No calculi could be detected in the urinary tract.
The diagnosis of bladder calculi in the pregnant woman is difficult and the stones usually are discovered during labor. Of the 30 cases reviewed by Cope, only 6 had been diagnosed antepartally, 24 being detected during labor. The 2 patients reported on by Cope and Armon presented with obstructed labor. The present case is similar to the one described by Bride, since the bladder calculus was discovered incidentally during radiological examination in the last weeks of pregnancy. The patient had experienced no urinary symptoms before or during pregnancy and the stone, if it had formed, had not been detected at the 2 previous cesarean sections 10 and 8 years ago. During pregnancy an intractable urinary infection should alert the attending physician but urinary frequency, dysuria or hematuria may not always be present.

The phosphatic secondary bladder calculus removed from this patient had produced no symptoms and, although from an endemic area, she gave no urinary history suggestive of vesical schistosomiasis. Examination of the stone showed no foreign body nucleus and no evidence of the disease was found either before or at operation.

The obstetric management of the pregnant woman with a bladder calculus has been described previously. With regard to the calculus, determining factors as to the type of operation to be used in each case include size and consistency of the calculus, the experience and skill of the surgeon and whether the patient is in labor. In this case open cystolithotomy was done at the time of elective cesarean section. However, under suitable circumstances and in the absence of obstructed labor or any obstetric contraindication to vaginal delivery litholapaxy should be the method of choice. It has obvious economic advantages over suprapubic cystolithotomy or vaginal cystotomy, especially in a developing country.

REFERENCES

EDITORIAL COMMENT
The author is careful to point out that no foreign body nidus was noted. Likely, however, would be the etiology of suture material dating back to the cesarean section many years earlier. R.F.G.
Correspondence

OBSTRUCTED LABOUR DUE TO VESICAL CALCULUS

Sir,

A nulliparous 18 year old Fulani woman was admitted to the Dosso hospital (Niger Republic) in obstructed labour. According to the patient, contractions had started three days earlier. The membranes had ruptured, but there were no signs of amnionitis at admission. The uterus was in tonic contraction, but a normal fetal pulse was detected with an ultrasonic device. Vaginal examination revealed the presence of a large, hard retropubic mass obstructing the vaginal outlet. Immediate lower segment caesarean section was performed, and a healthy full term male baby of 1.840 kg delivered. The mass was then found to be a vesical calculus.

Uterus and peritoneum were closed and a suprapubic cystotomy performed. A phosphatic, almost spherical calculus, 6 cm in diameter was removed. It contained no foreign body nucleus. The bladder mucosa was inflamed but did not present lesions suggestive of schistosomiasis. The bladder was closed and drained through a urethral catheter for 7 days.

A broad spectrum antibiotic (ampicillin 3 g/d) was given for 10 days. Convalescence was uneventful. At discharge a urine specimen contained no albumin and showed no microscopic signs of infection. Blood urea (27 mg/100 ml) and creatinin (1,1mg/100ml) were within normal limits. The patient left the hospital in good general health, but was lost to follow-up.

Only 8 cases of bladder calculus associated with pregnancy and labour were reported since the beginning of this century (1-4).

The present case is very similar to the one reported by Cope (3), since the patient presented with obstructed labour and caesarean section was immediately followed by suprapubic cystotomy to remove the calculus. Though very rare, bladder calculus should be recognised as a possible cause of obstetric problems, especially in developing countries.

If a bladder calculus is detected early in pregnancy, it should be removed by litotritry or cystotomy, depending on its size. In the early stages of labour it can sometimes be displaced upwards above the presenting part to allow spontaneous delivery. Once labour is obstructed, caesarean section is indicated. The calculus can be removed at the same operation (1,3).

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REFERENCES

presence of a foreign body and bacteria may lead to stone formation on implanted stents. In 2 of these cases the stones were of such a size and irregularity that endoscopic removal was not possible. It is therefore wise to X-ray all such stents prior to endoscopic removal.

Acknowledgement

We are grateful to Mrs A. Jones for typing this manuscript.

References


Requests for reprints to: A. E. MacKinnon, Sub-department of Paediatric Surgery, The Children’s Hospital, Western Bank, Sheffield S10 2TH.

Bladder Calculus Causing Vesicovaginal Fistula in Pregnancy

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Case Report

A 20-year-old primigravida was referred with an unconfirmed diagnosis of renal failure and suspected premature rupture of fetal membranes. She had a 2-year history of lower abdominal pain, frequency of micturition and dysuria, which had been getting worse during this pregnancy. She also felt a mass moving in the pelvis which had obstructed her urinary flow, causing severe pain and hesitancy. Plain X-ray showed a large calcified mass in the bladder (Fig. 1) and intravenous urography revealed bilateral hydronephrosis and hydroureter. One day before referral she developed leakage of foul-smelling fluid per vaginam. Since then she stopped having frequency of micturition and her pain became localised in the suprapubic region.

On abdominal examination the fundal height corresponded to 32 weeks’ gestation. The fetus was lying longitudinally, cephalic presentation. Fetal heart rate was 140/min and regular. On vaginal examination there was evidence of drainage of foul-smelling urine through a vesicovaginal fistula approximately 0.5 cm in diameter at the mid-anterior vaginal wall. A hard calculus protruded through it.

She was managed conservatively with antibiotic cover for 4 weeks. On the fifth week after admission lower uterine segment caesarian section was done and a male baby weighing 2450 g delivered with good Apgar scores 8 at 1 min, 10 at 5 min. The placenta was delivered, the uterus was closed in 3 layers and haemostasis was achieved. The bladder was then opened by a midline incision and an 80-g calculus was removed (Fig. 2). The bladder was found to be grossly oedematous. A circular fistula 2 cm in diameter was found at the base, near the

Fig. 1  Plain X-ray showing large bladder calculus.

Fig. 2  Bladder calculus weighing approximately 80 g.
urethra. Sharp dissection was done and the vaginal wall was separated from the bladder wall. Each wall was sutured with 2/0 chromic catgut. The omentum was placed between the 2 sutured layers and secured.

Comment
Coe et al. (1978), Cumming and Taylor (1979) and Lattanzi and Cook (1980) reported independently that the course of urolithiasis is not affected by pregnancy, although urinary tract infection is more common in such patients. Management depends on gestation. Stones detected at early gestation may be removed with little fear of interrupting pregnancy. When calculi are symptomatic or associated with infection or impairment of renal function, they may have to be removed urgently. Our patient had normal renal function tests and there was no need for immediate intervention. The fistula was caused by the sharp edge of the bladder calculus, presumably pressed between the advancing fetal head and the pubis through the bladder and vaginal walls.

If possible, large bladder calculi which may cause severe soft tissue damage and dystocia during labour should be removed during pregnancy either transurethrally or by suprapubic cystostomy. Our patient underwent removal of the calculus by suprapubic cystostomy at the same time as caesarian section and repair of the vesicovaginal fistula.

References

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Basal Cell Carcinoma of the Scrotum—A Rare Clinical Entity
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Basal cell carcinoma (BCC) of the scrotum is a rare disease which, because of its less aggressive character, must be differentiated from the more common squamous cell carcinoma (SCC). Two cases of basal cell carcinoma of the scrotum are presented and the literature is reviewed.

Case Reports
Case 1. A.W., a 70-year-old retired subpostmaster, presented with a 5-month history of an ulcer on the right side of the scrotum. This lesion had initially gradually increased in size, but appeared to have been static over the last 2 months. Although 40 years previously he had worked briefly as a car mechanic, the patient denied any exposure of the scrotum to industrial oils or chemicals.

Physical examination revealed a 1-cm ulcer with raised, rolled edges, induration and peripheral erythema. A 3-mm satellite nodule lay adjacent to the larger lesion. No enlarged inguinal nodes were palpable.

The lesion was excised with a 1.5 cm margin of normal skin. There was no evidence of recurrence 9 months after operation. Histological examination showed a lesion characteristic of BCC.

Case 2. H.H., a 72-year-old retired mechanical engineer, presented with a 7-month history of a slowly enlarging ulcer on the left hemiscrotum. Seven years previously he had undergone excision of BCC from the right upper canthus.

Physical examination revealed a nodular ulcer 0.6 cm in diameter, with some peripheral erythema. The inguinal nodes were not enlarged.

The lesion was excised with a 1-cm margin of normal skin. Histology showed a nodular lesion with focal ulceration and features of BCC, with peripheral cell palisading. The edges of resection were clear of tumour.

There was no evidence of recurrence 2 years after operation, although 9 months after excision of the scrotal lesion a further BCC was removed from the right cheek.

Comment
Scrotal carcinomas are uncommon, with an estimated annual incidence of 0.1/100,000 (Clemmensen, 1964). The majority are squamous lesions and only 5 to 7% are BCCs (Kickham and Dufresne, 1967; Ray and Whitmore, 1977). Only 15 cases of BCC of the scrotum have been documented in the world literature (Grossman and Sogani, 1981; Greider and Vernon, 1982; McDonald, 1982; Gerber, 1985).

In contrast to SCC, BCC is usually of low malignancy. However, there are reports of BCC arising from the scrotum and progressing to proven metastatic disease, with a delay of 4 years (Hughes, 1973) and 13 years (Richter, 1957).

A review of the literature shows that the prognosis of BCC originating in the scrotum is much better than that of SCC. Wide excision alone is usually
Pregnancy complicated by vesical calculus and vesicocutaneous fistula

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Bladder stones are a rare complication of pregnancy, with only 10 cases reported this century. This patient required a cesarean section for obstructed labor resulting from a 7 cm stone. Cystotomy with removal of the stone was performed with subsequent development of a vesicocutaneous fistula. (Am J Obstet Gynecol 1997; 176:728-9.)

Key words: Vesical calculus, vesicocutaneous fistula, obstructed labor

Vesical calculus is exceedingly rare in pregnancy, with only 10 cases reported in this century. Most often bladder stones are composed of calcium phosphate; however, in the obstetric literature 2 of the 10 cases involved a foreign body introduced in an attempt to induce abortion. Complications related to vesical calculi are common and include obstruction of labor, stillbirth, infection, and fistula formation.

Case report
The patient was a 22-year-old Vietnamese woman, gravida 1, para 0, who was seen at 19 weeks' gestation with a history of recurrent urinary tract infections. Evaluation included urine culture, serum electrolytes, renal ultrasonography, and a nephrology consultation. No abnormalities were identified. The remainder of the prenatal course was unremarkable.

At 38 weeks' gestation the patient was examined because of severe lower abdominal pain and an inability to void. She was febrile with bilateral costovertebral angle tenderness and was unable to tolerate a vaginal examination. She was admitted and given intravenous antibiotics for presumed pyelonephritis. Renal ultrasonography showed severe bilateral hydronephrosis.

Spontaneous membrane rupture occurred shortly after admission and active labor ensued. After epidural placement a vaginal examination revealed a large firm mass in the anterior vagina. The fetal vertex was not palpable vaginally because this large fixed mass completely obstructed the pelvic outlet. A primary low transverse cesarean section was performed for obstructed labor and operative evaluation of the mass.

A viable 2748 gm male infant was delivered uneventfully. Intraoperatively the mass was identified as being located within the bladder. Cystotomy was performed with removal of a 7 × 5.3 × 4.2 cm calcium phosphate stone weighing 150 gm (Fig. 1). The bladder was repaired in three layers with chromic suture. The cystotomy was found to be watertight after distension with methylene blue.

Postoperatively fever and abdominal pain developed that was treated with 6 days of intravenous antibiotics for presumed endometritis. However, the patient did not defervesce until empiric heparin therapy was started for presumed septic pelvic thrombophlebitis on postoperative day 7. The patient was discharged home with an indwelling Foley catheter to complete a 14-day catheterization.

One month after operation the patient was readmitted for pyelonephritis and on examination was noted to have a wound separation. She complained of leakage from the wound on urination. Cystoscopy confirmed a vesicocutaneous fistula that resolved with a prolonged indwelling Foley catheter.

Comment
This is the first case in the literature describing a vesicocutaneous fistula after bladder stone removal for obstructed labor and the first case of a bladder stone complicating pregnancy reported in the American literature. Reported complications are common, including obstructed labor and fistula formation.

Diagnosis is difficult given the rarity of vesical calculi in pregnancy. A high index of suspicion is warranted when a patient with a long history of recurrent urinary tract infections or pelvic pain is evaluated. Although large vesical calculi are easily palpable on pelvic examination, detection of smaller stones may require radiographic examination. Interestingly, in our case the stone was not
detected on abdominal ultrasonography even in the presence of severe bilateral hydronephrosis. It can be hypothesized that a large bladder stone can be mistaken for the fetal vertex in a term pregnancy.

Fistula formation is a rare complication of bladder stone in the nonpregnant patient; however, 3 of the 10 patients reported (including this report) had this complication. Perhaps the pressure and movement of the fetal vertex predisposes to bladder inflammation and injury, making fistula formation more likely. Removal of the stone at cesarean section appears warranted; however, this may or may not contribute to development of a fistula.

REFERENCES
Obstructed Labour Due to a Vesical Calculus

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EDITORIAL COMMENT: We accepted this short case report because although the condition is rare it is appropriate for obstetricians to know that a vesical calculus can cause obstructed labour as in this primipara.

Case report

A 29-year-old gravida 2 with a history of previous normal delivery was referred in obstructed labour from a peripheral hospital. Her previous pregnancy and delivery 2 years earlier had been uneventful. It was an unsupervised pregnancy but delivery was in a hospital. She had no antenatal care in the present pregnancy and did not know the date of her last menstrual period. On admission she gave a history of having been in labour for 9 hours. There was no history suggestive of urinary tract problems in the past. She appeared exhausted. There was mild tachycardia but her blood pressure was normal. She was afebrile. Her cardiovascular and respiratory systems were normal. Obstetrical examination revealed a full-term uterus with vertex presentation. The upper segment of the uterus appeared tonically contracted and the lower segment appeared stretched. The fetal heart was well heard with a baseline around 160 bpm. The bladder was distended, was catheterized with difficulty and blood-stained urine was drained. Vaginal examination revealed a fully dilated cervix with the vertex arrested at the pelvic brim by a hard mass anteriorly on the right side. There was extreme caput formation. The mid and lower pelvis appeared normal. Since the patient had had a normal vaginal delivery earlier, contraction at the brim of the bony pelvis was excluded. Obstructed labour due to a vesical calculus was suspected and an immediate Caesarean section was performed. On laparotomy blood-stained fluid was seen in the peritoneal cavity. A live female baby, birth-weight 2,700 g, was delivered. The baby cried after resuscitation. The lower uterine segment was extremely thin and was sutured in a single layer as it was friable. Pomeroy's method of tubal ligation was performed. A hard mass was palpated in the bladder. Cystolithotomy was done. A vesical calculus measuring 9 x 4 cm, weighing 100 g, was removed from the bladder. It was an oxalate calculus. The bladder was closed in 2 layers with 2 zero vicryl. Continuous catheterization was maintained for 7 days. The postoperative period was uneventful. Both mother and baby were discharged home on the 12th day.

DISCUSSION

Bladder calculi are extremely rare in females. It is believed that only 2% of vesical calculi occur in women. Despite the presence of such a large calculus this patient did not report any urinary symptoms. The commonest cause of obstructed labour is cephalo-pelvic disproportion (around 70%) in developing countries (1-3). The incidence of obstructed labour is on the decline even in developing countries; in India at referral hospitals the incidence is 0.8-2% (2-4). Vesical calculus is a rare cause of obstructed labour. Though there are occasional case reports, studies on obstructed labour do not quote this cause (1-3). However in women with previous normal deliveries when labour gets obstructed with a vertex presentation as in our patient, this cause should be kept in mind.

References

Case report

Vesical calculus causing dystocia

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Abstract

Vesical calculus is a rare cause of dystocia. We report a case in a 22-year-old primigravida. © 2002 Elsevier Science Ireland Ltd. All rights reserved.

Keywords: Vesical calculus; Dystocia

1. Case report

A 22-year-old primigravida presented with 8 months amenorrhea and a history of leaking per vaginum for 1 day. She was unsure of the date of her last menstrual period. Her general physical examination was normal. Abdominal examination revealed an enlarged uterus corresponding to 34 weeks pregnancy. A single foetus in longitudinal lie was palpable and foetal heart rate was 136 per min and regular. Speculum examination revealed a closed os and an unefaced cervix. The pelvis was adequate. No leaking per vaginum was observed. The next day she was febrile (38.8 °C) and induction was performed by inserting PGE2 gel in posterior fornix. Nine hours later the cervix was fully dilated, with the vertex presenting at −3 station. A hard mass with restricted mobility was felt in the right fornix. A provisional diagnosis of vesical calculus obstructing labor was made. An emergency lower segment caesarean section was performed. A live male baby weighing 2.4 kg. was delivered and a vesical calculus measuring 4.5 cm × 3.5 cm × 1.3 cm weighing 28.3 g was removed (Fig. 1). On chemical analysis it was found that it mainly consisted of calcium oxalate and calcium phosphate. The nucleus of the calculus was made of uric acid. Her postoperative period was uneventful.

2. Discussion

Only 36 cases of vesical calculus with pregnancy have been reported in the last 125 years, and only 10 in the 20th century. In 1875, Hugenberger [1] reviewed 23 cases and reported another 3 cases. Fifteen of these 26 cases had either spontaneous or forced labor with calculus in situ and 12 of them developed either incontinence of urine or vesico-vaginal fistula. Six patients reported in early labor. In them the calculus was pushed up and normal vaginal delivery was performed.

Of the 10 cases [2–10] reported in the last century, 7 underwent lower segment caesarean section (LSCS). Five of them had simultaneous cystolithotomy and LSCS while two underwent cystolithotomy at a later date. Two patients [5,9] who underwent simultaneous LSCS and cystolithotomy developed vesico vaginal or vesico cutaneous fistulas. Both these patients had long duration of obstructed labor before they reported to the hospital.

Although dystocia due to vesical calculus is rare, it should be considered as a cause of dystocia especially in the presence of a hard mass in pelvis. Even if the patient is diagnosed in early pregnancy, cystolithotomy should not be performed as it may precipitate premature labor. In cases that present in early labor the calculus should be pushed up manually and a trial of normal labor may be in the order. In cases where this fails or in cases that present in late stages of labor, a combined procedure of LSCS with cystolithotomy is the procedure of choice.

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Fig. 1. The vesical calculus measuring 4.5 cm x 3.5 cm x 1.3 cm.

References

Abstract  Bladder stone can exceptionally cause an obstetrical dystocia. A combined procedure of cesarean section with a cystolithotomy is the most advocated attitude. The authors reported a rare case of mechanical dystocia caused by a bladder stone in a 27 year-old multiparous women. The diagnosis was suspected during labor and a vaginal examination revealed a large firm mass in the anterior vagina wall. This mass was responsible for an obstruction of the pelvis requiring a cesarean section. A cystotomy was performed intraoperatively and a bladder stone weighing 130 g and measuring $8 \times 6 \times 4 \text{ cm}^3$ was extracted. The postoperative course was uneventful.

Keywords  Bladder stone · Obstetrical dystocia · Delivery

Introduction

Mechanical dystocia is a common problem in Obstetrics leading to serious maternal and perinatal complications if not managed correctly. Bladder stone can exceptionally cause obstruction of labor [1]. The authors report a case of a large bladder calculus diagnosed during the second stage of labor as a cause of dystocia, and we try to discuss Diagnostic and Therapeutic aspects of this very rare condition.

Case report

Ms. K.H., 27 years old, gravida 4 para 4. She had a vaginal delivery for the first two pregnancies. The third delivery was by cesarean section for breech presentation and suspected macrosomia. She had no prenatal care during her last pregnancy in which she reported a history of urinary symptoms with urgency and hematuria. The patient was admitted on the labor ward in spontaneous labor at 39 weeks of gestation. She had a normal blood pressure, no fever, fundal height at 34 cm, fetal heart rate was 130 bpm, and she had regular uterine contractions every 3 min. Vaginal examination showed ruptured membranes with clear amniotic fluid, full cervical dilatation, vertex at station 0 and a large firm mass anteriorly obstructing the pelvis. This mass was suspected to be a large bladder calculus. A cesarean section was performed for obstructed labor. A 4,040 g female baby, with an Apgar score of 10 at 1 and 5 min was delivered. The mass was intraoperatively identified as being located within the bladder, a cystotomy was performed with the removal of a large calcium phosphate stone weighing 130 g, and measuring $8 \times 6 \times 4 \text{ cm}^3$ (Fig. 1). The postoperative course was uncomplicated, the bladder drainage lasted 10 days and the patient was discharged on the tenth day of admission. She was free of complications after 6 months of follow-up.

Discussion

The urolithiasis during pregnancy is relatively rare and its common complications are: infections, premature deliveries, abortions, and urinary fistula [2]. Cases of
mechanical dystocia due to a bladder stone have been exceptionally reported in the literature, and only ten cases of those have been published in the last century [1]. These bladder stones are often of phosphocalcic nature, and may be associated with the presence of a foreign body [2, 3].

The Diagnosis of obstructed labor by bladder stone is generally easy when the stone is large enough and palpable by vaginal examination [2] as in this case. In some situations, it is important to rule out: Pelvic bone Tumors, vaginal or bladder Neoplasms and Fibroids. In some doubtful situations, the ultrasonography and radiography of the urinary tract may be useful, but they are always limited by the interposition of the fetal presentation.

Obstetrical management of an obstructed labor by a large bladder stone depend on the stage of labor and the possibility to push the stone out of the birth canal to permit the descent of the fetal head. When this manoeuvre is successfully performed the vaginal delivery can be possible, but if not, a cesarean section must be performed. Among the ten cases reported in the last century only three were delivered vaginally [1].

The treatment of the bladder stone will be differed if the patient is delivered vaginally. If a cesarean section is performed the calculus could be simultaneously removed, as in this case. However, the cystotomy during a cesarean section could increase the risk of urinary fistula. In the literature, two out of the six patients who had surgical removal of the calculus during the cesarean section, had developed respectively a vesico-cutaneous and a vesico-vaginal fistula [2, 3]. However, in these two cases the cesarean section was performed after a prolonged labor, which may also be the cause of urinary fistula.

Conclusion

Bladder stone is an exceptional cause of obstetrical dystocia. This etiology of obstructed labor must be suspected in the presence of a firm mass above the anterior vaginal wall. Obstetrical management depends on the stage of the labor and the possibility to release the birth canal by pushing the calculus. When a cesarean section is indicated, intraoperative cystotomy with removal of the calculus is the most advocated attitude, even if it seems to increase the risk of urinary fistula.

References

CASE REPORT

Giant intravesical calculus during pregnancy

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Abstract Urolithiasis is commonly found during pregnancy; but the presence of a giant vesical calculus during pregnancy is a very rare entity, associated with several potential obstetric complications. A 25-year-old primigravida at 25 weeks of gestational age was referred to our tertiary care unit because she presented a giant hyperechoic intravesical mass and inability to pass urine with suprapubic pain since 2 days. An open cystolithotomy revealed a huge intravesical calculus. The patient continued with her pregnancy until full term without adverse perinatal outcomes.

Keywords Giant intravesical calculus · Pregnancy ·
Cystotomy

Introduction

Giant vesical calculus weighing more than 100 g is a very rare entity. There are fewer than 30 reports in the available English literature and no more than three during pregnancy [1].

Several obstetric complications have been associated with urolithiasis, including preterm labor and preterm premature rupture of membranes, although the reported rates of these complications in association with urolithiasis vary widely and overlap normal background rates [2].

We report a case of vesical calculus weighing 528 g in a female patient without any predisposing factors.

Case

A 25-year-old primipara at 25 weeks of gestational age was referred to our tertiary care unit because of the presence of a giant intravesical mass, hematuria, inability to pass urine, and suprapubic pain since 2 days. Her medical and surgical histories were unremarkable. Over the last year, the patient presented three previous episodes of hematuria, but she did not get medical assistance. She denied previous episodes of urinary retention. On assessment in the emergency room, she was afebrile, with stable vital signs; the patient was uncomfortable with suprapubic tenderness. The pelvic examination revealed a 12 cm in its greater diameter; the uterus fundus was according the gestational age with no uterine contractions, and the cervix was uneffaced and without dilation. Her hemoglobin was 12.6 g/dL (normal 12.0–14.4 g/dL), her white blood cell count was 8,400 leukocytes per mm$^3$ (normal 3,500–10,500 leukocytes per mm$^3$), and her platelet count was 273,000 platelets per mm$^3$ (normal 150,000–450,000 platelets per mm$^3$). Her blood chemistry were as follows: potassium 3.8 mEq/L (normal 3.6–4.8 mEq/L), chloride 107 mEq/L (normal 100–108 mEq/L), bicarbonate 18 mEq/L (normal 22–29 mEq/L), blood urea nitrogen 45 mg/dL (normal 6–21 mg/dL), creatinine 1.2 mg/dL (normal 0.6–0.9 mg/dL), and serum glucose 93 mg/dL. A Foley catheter French no. 12 was placed to drain urine and obtain a sample for a urinalysis that revealed 12 leukocytes per field, positive nitrites, and uncountable erythrocytes. The urine culture tests were within normal limits. The urine Gram stain revealed Gram-negative bacilli.

A renal ultrasound examination revealed normal kidneys with marked pyeloalcaline dilation; the pelvic survey reported an intravesical mass of $6.8 \times 6 \times 5.3$ cm hyperechoic mass and no other remarkable findings in the kidneys, and
the obstetric ultrasound survey was within normal limits. A cystoscopy was unable to be performed because the urethral neck was occluded by the intravesical mass. A giant intravesical calculus was suspect, and no other radiology studies were ordered (Fig. 1). Intravenous fluids were started as well as gentamicin (2 mg dl$^{-1}$ kg$^{-1}$ loading dosage and then after 1.5 mg dl$^{-1}$ kg$^{-1}$ every 8 h). Urology consultation decided to admit the patient and schedule her for an open cystotomy after receiving 5 days of intravenous antibiotics. The urinary cultures reported *Escherichia coli* sensible to gentamicin and nitrofurantoin.

A cystotomy was done to extract the intravesical stone that measured 6.5×6×5 cm (Fig. 2). No complications during surgery or postoperatively were reported, and 100 mg of rectal indomethacin was given to prevent premature uterine contractions. The fetal heart rate was monitored during and after the surgery, and an obstetric ultrasound was realized the following day, reporting a normal obstetrical survey. The renal function tests returned to normal gradually on the sixth postoperative day. The patient was home discharged 1 week after the surgery with a silicon Foley catheter French no. 14 that remained placed for 2 weeks. The urinary cultures reported *Escherichia coli* sensible to gentamicin and nitrofurantoin.

**Discussion**

Lifetime risks for developing urolithiasis range from 1% to 10% [1]. The reported incidence of urolithiasis in pregnancy varies widely from 1 in 200 to 1 in 2,000 pregnancies [2, 3].

Giant bladder calculi are rare in modern urological practice. In developing countries, the presence of many alternative treatment methods for stone disease may cause delay in seeking medical opinion, enhancing their morbidity [4]. Bladder calculi may often present as it did in our case with gross hematuria, and the patients may or may not complain of discomfort, pain, or other urinary tract symptoms except if there are other underlying causes or if the size of the calculi is large. In this case, we cannot consider that pregnancy delays the diagnosis because despite the three previous episodes of hematuria, the patient did not seek medical assistance [5].

The giant or massive calculi are seen commonly in men due to benign prostatic hypertrophy or urethral stricture, but there are other situations like trauma, catheterization, neurogenic bladder, and the presence of a foreign body that have been also described. In our case, the patient did not have any underlying disease that seemed to be the cause of the stones [1].

Our patient did not complain of recurrent urinary tract infections that usually occur in these patients. Azotemia and urinary retention are other two complications associated with giant vesical calculi. In our case, the postrenal azotemia improved considerable after bladder decompression [3].

The diagnosis of giant vesical calculi is usually performed only with clinical signs and urinalysis, but an ultrasound evaluation of the abdomen and kidneys should be obtained. In nonpregnant patients, a computed tomography is preferred, but it should be avoided during pregnancy. Ultrasound still remains the preferred study for locating kidney and bladder stones during pregnancy because the fetus is not
exposed to ionizing radiation [2]. The duplex Doppler ultrasound may increase the accuracy of diagnosis of ureteral obstruction, but it does not provide extra help for bladder calculi than an ordinary ultrasound. Renograms, renal scans, intravenous pyelogram, and retrograde pyelography are useful tests in the nonpregnant patient population when the diagnosis of a ureteral stone is in doubt, but because of the levels of ionizing radiation that these studies provide, they are not recommended during pregnancy. If the diagnosis is still uncertain after ultrasonography, magnetic resonance imaging can be an option because it does not deliver ionizing radiation or ionized contrast and has thus far been shown to be safe in pregnancy [6].

Currently, data from randomized studies are lacking on the most effective treatment protocols for urolithiasis during pregnancy. However, those studies are mainly in smaller calculi and not related to giant intravesical calculi. The indications for surgical intervention of a urinary tract stone in pregnancy should be the same as in the nonpregnant patient: the presence of infected hydronephrosis and/or sepsis, an obstructed solitary kidney or bilateral ureteric obstruction, unrelenting pain not responding to oral analgesia, and failure of conservative management. The invasive management has evolved considerably over years from the “blind” insertion of crushing forceps into cystotomy with calculi removal to laser fragmentation. Open surgery has been the best recommended modality for large stones, but nowadays, most urologic literature recommends the use of holmium-doped yttrium–aluminum–garnet laser to destroy stones as a safe procedure during pregnancy [2, 7, 8].

In case of smaller or moderate size calculi, minimally invasive procedures are performed like optical mechanical cystolithotripsy, electrohydraulic shockwave lithotripsy, or a small size grasper [9]. Several adverse perinatal outcomes have been associated with urolithiasis, including preterm labor and preterm premature rupture of membranes. Although, the reported rates of these complications in association with urolithiasis vary widely and the incidence of preterm delivery is not usually stated. In our case the invasive treatment for the calculi extraction was necessary to normalize the postrenal azotemia. Despite the size of the urinary stone and the surgery during pregnancy, the pregnancy achieved the full term, with no other adverse perinatal outcomes.

References

Vesical calculus: An unusual cause of labour dystocia

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Introduction
Mechanical dystocia occurs in obstetrics, is not uncommon and, if improperly managed will lead to maternal and perinatal
complication. The commonest cause of obstructed labour is cephalo-pelvic disproportion in developing countries (Ozumba and Uchegbu 1991). The incidence of obstructed labour is on the decline even in developing countries; in India at referral hospitals, the incidence is 0.8–2% (Jayaram 1993; Sarkar and Paul 1990). Urolithiasis, during pregnancy, can lead to infections, premature deliveries, abortions and urinary fistula (Cormier 2006; Pais et al. 2007). Mechanical dystocia due to a bladder stone is rarely reported in the literature. We report a case of labour dystocia due to giant vesical calculus, and review the diagnostic and management dilemmas.

Case report
A 21-year-old primigravida was referred from a general hospital at 37 + 2 weeks' gestation in labour, with suspected pelvic bony tumour. She had a history suggestive of urinary tract infections and difficulty in initiation of micturition, which was treated with antibiotics. On admission to the labour ward, she was afebrile and had normal blood pressure. Her fundal height was corresponding to 34 weeks' gestation and fetal heart rate was 130 b.p.m. She had moderate regular uterine contractions. Vaginal examination showed absent membranes draining clear amniotic fluid, cervical dilatation of 8 cm, head at '0' station and an impacted large firm mass (size 5 × 4 cm) anteriorly obstructing the pelvis, which was suspected to be a large bladder calculus. Inspite of good uterine contraction for 4 h, with the calculus impacted and obstructing the outlet, there was no descent of the fetal head and hence, caesarean section was performed. A 2,500 g male baby, with an Apgar score of 9 at 5 min was delivered. After uterine closure, cystotomy was performed with the removal of a large calcium phosphate stone weighing 130 g, and measuring 6 × 5 × 4 cm³ (Figure 1). During the postoperative period, she had urinary tract infection with E. coli, which was treated with ciprofloxacin 500 mg b.i.d. for 10 days. On ultrasound examination, the right kidney appeared contracted (7 × 2 cm) with grade 1 hydronephrosis on left side. She developed wound dehiscence and required secondary suturing. Foley's urinary catheter was removed on the 14th day and she was discharged on 14th day of admission. She was free of complications at 6 months follow-up.

Discussion
Bladder calculi are extremely rare in females; incidence in pregnancy varying from 1 in 200 to 1 in 2,000 pregnancies (Cormier 2006; Pais et al. 2007). Obstructed labour due to a bladder stone is rarely reported in the literature, with only few cases due to a giant vesical calculus (Seth 2002).

Giant vesical calculus can occur in women with neurogenic bladder, presence of foreign body or trauma or catheterisation. Recurrent urinary tract infection might be the cause of the giant calculus in the index case. Patients may be asymptomatic or have complaints of discomfort, pain, haematuria or other urinary tract symptoms. In our case, recurrent episodes of difficulty in initiation of micturition were present, due to its large size. Azotaemia and urinary retention are two common complications associated with giant vesical calculi (Escobar-del 2008).

Diagnosis of obstructed labour by bladder stone is usually easy when the stone is large enough and palpable by vaginal examination, as in this case. Presence of a calculus in the bladder may be confirmed by introducing a metal catheter into the bladder. When the calculus has become impacted in between the pubic bone and the fetal head, it can simulate a bony neoplasm of the former. Use of ultrasonography and radiography of urinary tract is limited by the interposition of fetal presentation.

Due to the risk of premature labour or premature rupture of membranes, cystolithotomy should be avoided, even if diagnosis is made early in pregnancy. Obstetrical management of labour dystocia by large bladder stones depends on the stage of labour and the possibility to push the stone out of the birth canal to permit the descent of the fetal head (Ait Benkaddour et al. 2006; Escobar-del et al. 2008). If the patient presents in late stages of labour, as in our case, a combined procedure of caesarean section with cystolithotomy is the procedure of choice. However, the cystotomy during a cesarean section may increase the risk of urinary fistula formation (Penning et al. 1997; Cope 1961). This may be a complication of prolonged or obstructed labour, rather than due to the cystotomy itself. Vaginal cystotomy is contraindicated in the presence of infection or bruising of the vaginal wall, as it increases the risk of fistula.

Although dystocia due to vesical calculus is rare, it should be considered as a cause of dystocia, especially in the presence of a hard mass in pelvis. When a caesarean section is indicated, intraoperative cystolithotomy is the most preferred approach. Despite the presence of vesical calculi and its large size, in our case, pregnancy reached full-term, with no other adverse maternal and perinatal outcomes.

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References


