Reviewer's report

Title: Treatment delay of bone tumours: Compilation of a sociodemographic risk profile. A retrospective study.

Version: 1 Date: 9 August 2007

Reviewer: Tim O Eden

Reviewer's report:

This is a very timely, carefully analysed retrospective review of a reasonably sized cohort of patients with all forms of bone tumours treated in a single unit. The authors have reviewed the literature including both of the studies in which I have been involved and are making a considerable contribution to our understanding and knowledge. I fully understand why they have analysed all forms of bone tumours but in a similar but as yet unpublished large cohort from the UK they have found similar findings but when the break the cohort down by tumour type particularly highly malignant tumours in young people in some of the predictive and prognostic factors cease to be significant which is quite puzzling and I appreciate the authors attempt to address that in their discussion. I would really appreciate the authors looking at some of the stylistic and grammatical changes which would enhance the paper but more of that later. Those are not essential revisions. However the following comments should be addressed I think. Firstly in their background on page 4 they talk about symptoms of bone neoplasms maybe vague and misleading. This is something that we and others have also focussed on particularly with reference to axial tumours. The reference they give particularly does relate to bone sarcomas of the pelvis where the symptoms may be notoriously vague. However for the majority of young people malignant tumours whether they be osteosarcoma or Ewing’s sarcoma tumours are of limbs presenting with lumps and usually painful lumps and that is why it is even more puzzling that there should be delays in diagnosis both related to patient action or inaction and especially of professionals. What they have discussed about these features is very pertinent particularly with reference to either primary care physicians or specialists or a combination of both identifying symptoms being serious, conducting timely investigation and then initiating therapy. It would appear just as in the paper by Goyal et al and in a study we have performed recently all tumours in the age range 15 – 24 professional delay in our clinical practice is always longer than patient delay.

I personally think that not just the vagueness of symptoms but really those professionals don’t think this could be a tumour. It is important to note that the delays although they have a wide range in this study are actually shorter than some of the other published series. We have always considered that the German health Care system was more efficient at picking up serious disease than for example in the UK. There is only one are that I am confused and I would appreciate the authors clarifying this for myself and other readers in particular and that is when they come to place of residence and they have stated that we
detected that the criterion rural habitation caused a significant elongation of the overall symptom interval. Surprisingly this factor has no significant influence on patient delay and only a slight influence on professional delay. I find that very puzzling since by their own definition and the accepted international standing of overall symptom interval is that it is made up of the patient delay and the professional delay ie the time between when the patient first experienced symptoms to consulting somebody and then the professional delay is from consultation to treatment. In the latter there is a component when primary physician is approached, decides what should be done and may not recognise the symptoms and send the patient away with antibiotics, analgesia or whatever then does the patient get to see a specialist and how quickly. In fact significant prolongation of overall symptom interval must mean that there is either patient or professional delay. Indeed the authors go on to talk about the problem with rural practice why there might be delays. There does need to be clarification of the statement and last paragraph on page 12 of their paper.

Finally in the compulsory revisions that I would ask them to address would be why skip between days, weeks and months in the text, tables and graphs. For comparison with other papers it would be much better to stick to weeks that they use in for example Table 3 and on their curves state median and mean delays in days and then their axis is months. I do feel that there should be some consistency in that.

Minor essential revisions

The paper is by and large well written but I think that the abstract could be improved with some minor revisions of the text. I suppose in reality these are discretionary revisions but I would recommend to the authors that they might consider the following.

In the Background of the abstract second sentence to read 'The purpose of this study was to analyse sociodemographic risk factors for bone tumour patients in order to identify those at risk of prolonged patients delay…..'. It might be at the end after 'professional delay (from consultation to treatment) and overall symptom interval…..'. In the next sentence I think it would be better for them to say 'Understanding these relationships might enable us to shorten time to diagnosis and survival.'

In the Methods section I think again it would be better to say '……analysis of 265 patients with bone tumours documenting sociodemographic factors,……'

In the Results section I think they should spell out age under 30 years. I don’t why they should have it in inverted commas ‘Age under 30 years significantly predisposed to a prolonged professional delay and symptom interval. Rural living caused a significant prolongation of symptom interval.’ Wherever they have used elongation in the text I would recommend that they use prolongation.

In the Conclusions section I would suggest ‘We succeeded in identifying the histology independent risk factors of age under 30 years and rural habitation for
treatment delay in bone tumour patients. Knowing about the existence of these risk groups age under 30 years and female gender could help the physician to diagnose bone tumours earlier. The causes for the treatment delay of patients living in rural area have to be investigated further.'

In the actual text of the paper in the background second paragraph I think it would be better to say '...........might be attained by identifying the 'at risk' group of patients....'. Then 'These factors might be attributed to the patient, the doctor or both ....'

In the final paragraph instead of saying .....and in parts for older patients say and to some extent.

Just one comment In the Methods in the third paragraph on page 5 I think it would better if they said 'For each patient three time points had been recorded;' They are presuming that these had automatically been recorded in the notes therefore could be analysed.

On page 10 in the Discussion third sentence I think they shouldn't use the term 'lags' but use 'delays'.

On page 11 I would appreciate if the authors would look at the sentence ‘In these analyses all tumour types were subsumed under preset categories of tumour differentiation and genesis, expressively knowing that we did not notify specific characteristics of single tumour types.' I really don’t know what the authors are saying there. I suspect what they are saying is that they have not classified by individual tumour diagnosis but put the tumours in the groups benign, semi benign and malignant and whether they are primary or metastatic tumours.

Also on page 11 under Age second sentence it would be better to say 'But in contrast ......'. The sentence '.................. This delay may be exceedingly caused by the physician.' doesn’t make sense. It either means physician delayed making the diagnosis in younger patients or that the overwhelmingly any delay was due to the physician.

In the same section but on page 12 the authors have said they are the first to report a prolonged professional delay and symptom interval for young patients but that was reported in the Goyal paper and has been identified by other researchers.

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

As someone researching in the same area of work obviously could be perceived as a competitor but I do not however have any financial competing interests in relation to this paper.