Reviewer’s report

Title: Preoperative workup in the assessment of adrenal incidentalomas. Outcome from 506 consecutive laparoscopic adrenalectomies.

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Reviewer: Michael Brauckhoff

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This is a retrospective multi-institutional study on patients who underwent laparoscopic adrenal surgery due to “adrenal incidentaloma” (n=282 procedures) and symptomatic adrenal tumors (n=224 procedures). Main aim of this study was to examine the impact of existing guidelines for diagnostic work-up in incidentally discovered adrenal tumors on surgical quality. To answer this question, the authors compared patients with incidentaloma who were preoperatively examined according to those guidelines (n=230 procedures, group A) to patients who did not underwent these examinations before surgery (n=52 procedures, group B). As main result of this study, the authors concluded that the guidelines were effective in detection of serious lesions (endocrine active tumors, cancer) as well as in avoiding unnecessary surgery.

In its present form the paper cannot be recommended for publication. It is of low scientific quality and does not fulfill the requirements of a scientific paper at all. It will need a complete and thorough revision in terms of scientific structure, language as well as editing at all. The paper is almost not to understand and the conclusions are not covered by the results. The paper mixes many aspects but did not answer one of them completely.

Major concerns

(1) The authors need to define clearly what’s their definition of surgical indication in incidentalomas. Performing biochemical tests followed by surgery is not necessarily “following guidelines” if the tests did not reveal any pathological results. What definition did the authors use for “subclinical Cushing” or “subclinical aldosterone secretion”? What cut offs did they use in pheochromocytoma? A stringent definition what type of imaging was required allowing the definition of “sufficient” work up is needed. When the authors would need more than a CT scan?

(2) The authors need to describe more in detail how the data were acquired. They used a questionnaire – but what parameters were included and how were these parameters recorded? Who filled out the questionnaire? Is it possible to re-identify all included patients? Did they perform a quality control of the collected data (a study dealing with quality control of medical treatment should at least control the quality of the registered data)? Who decided eventually if a preoperative work up was sufficient or not (see also (1))?

(3) The patients in group B need to be described more in detail. What made that
they were classified as “insufficient” preoperative work up patients. This group might include patients who underwent all recommended examinations apart a dexamethasone suppression test (which might be disputable in a healthy young patient with a BMI of 19 and a 4.5 cm large adrenal tumor without any clinical signs of cortisol secretion) but also those patients with metabolic syndrome and bilateral adrenal tumors with a diameter between 2.5 and 3 cm who did not receive biochemical testing at all. In other words, this group might be very heterogeneous in terms of quality of preoperative examination/work up.

(4) What was the reason to accept patients without complete work up to surgery? In my country the surgeon is responsible and patients without complete work up would never be accepted to surgery. Is this different in Italy?

(5)

(a) Table 1 and 2 are not necessary (patients with symptomatic tumors should be excluded; all other information can be given in the text).
(b) Table 4 is interesting but has nothing to do with the aim of the study.
(c) Table 5 and 6 should be combined resulting in a clear presentation of both groups. The information regarding the correlation of diameter and histological diagnosis has nothing to do with the aim of the study. It would be much more interesting to could compare both groups in terms of tumor diameter and biochemical activity. Remarkably, in group B the number of patients with tumors <4 cm was not significant higher when compared to patients with “sufficient” work up (58% vs. 49%) — and even lower for those patients with non-functioning adrenal tumors (48% vs. 56%). So, what was the indication to surgery in patients without hormone secretion and tumors < 4 cm in group A? What was the indication to surgery in myelolipoma?
(d) Table 3: “other adrenalectomies” can be removed. Is this correct: conversion in 7.6% in group B but only 1.7% in group A? The differences in surgical morbidity between group A and B are difficult to understand. Group B had smaller tumors (as expected) giving as potential disadvantage of “insufficient” preoperative work up only possibly undetected biochemical activity with potential consequences for the intraoperative (pheo) or the postoperative (Cushing) course. This has obviously not been examined at all.

(6) Were there differences between the participating hospitals?

(7) Patients with suspected ACC need complete staging (including CT thorax). Was this standard in group A? What ACC stage (N and M status) had the patients in both groups?

(8) The title is misleading. There were 506 procedures but only 282 due to incidentaloma.

(9) How many patients with incidentaloma were seen in these institutions at all? Did the authors have follow up information regarding patients who were not operated? Are there patients who were primarily not classified as surgical patients but later – due to increasing tumors or biochemical activity?
Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

No interests.