Reviewer's report

Title: Validity of gout diagnosis in Swedish primary and secondary care

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Reviewer: Frank Wollheim

Reviewer's report:

This is a valuable and interesting study of validity of criteria for gout in primary care and in a hospital-based rheumatologic unit. It confirms the unfortunate non- or underuse of joint fluid examination among physicians and confirms apparent high validity of the Mexican and Dutch criteria which do not contain joint fluid examination. The study is based on routine hospital and primary care unit records. This reviewer would like the authors to clarify some points below.

Comments

1. It is stated that the primary care units were “randomly” selected. Please describe how this was done.

2. It seems likely that some patients were referred from primary care to the only specialist unit. Please supply information on whether this applied to any of the 132 hospital cases.

3. Page 4 line 49 “It mainly affects the lower extremities” Although this may be correct it I would rather stress that it may involve any joint and therefore be misdiagnosed and mixed with e.g. RA. Furthermore if the authors want to raise awareness they should present better characteristics of acute gout, e.g. the acute onset and the nocturnal onset etc.

4. P4, Line 53ff. The crystals should be intracellular.

5. P5, Line 90: please specify the term “specialized”. It obviously includes primary care physicians, which in many countries would not be called “specialists”.

6. P8, Lines 153 ff. Please define the term “attended”. –does it refer to the number of individuals who visited the units or the total catching population?

7. The identification of 173 and 89 patients at the two primary care centers should not be extrapolated to indicate a prevalence of around 1% since one does not know the point prevalence, and thus one does not know what proportion of all gout individuals in the area actually were diagnosed. The same of course applies to the 132 cases identified at Sahlgrenska Hospital. Therefore one needs to discuss how representative the identified cases are for all patients with gout. The reviewer realizes that the answer to this question requires an epidemiologic study which is out of the scope of this report, but nevertheless the issue must be discussed and have implication on the conclusions regarding criteria validity. The authors touch upon the problem in the last paragraph of the discussion, P11, line 265.

8. In view of the high prevalence of hypertension and cardiovascular disease,
one would like to know what drugs they were treated with

9. P10, lines 250 ff: “the administration of allopurinol may support the diagnosis of gout.” Does one mean the false diagnosis?

10. In table 3 one notes that patients with 3 gout diagnoses showed slightly lower validity with the Dutch criteria. Chance?

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

None