

## References

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### Peptic ulcer and non-steroidal anti-inflammatory agents

SIR.—I was most interested in the recent case control study by Duggan *et al* (*Gut* 1986; **27**: 929–33) confirming an association of non-steroidal anti-inflammatory agents (NSAIDs) with gastric ulcer in Australia. I note that no less than 42% of the cases presented with haemorrhage, and wonder whether comparison of this group with the remainder would add anything to the conclusions. British studies have shown a significant association of NSAIDs with haemorrhage from gastric ulcer in the elderly<sup>1–3</sup> and also with ulcer perforations.<sup>4</sup> Although it might seem logical that if an agent causes ulcers to bleed and perforate it could also cause an ulcer in the first place, this problem is far from simple – especially as

we do not know how gastric ulcers begin. If, for example, they can arise from gastric erosions, why are they usually single and why do they not follow mucosal biopsies?

If the authors found that NSAID ingestion was related to symptomatic non-bleeding ulcers, this would be valuable information. Unfortunately it still would not solve the question of cause, as so many ulcers are symptomless and/or undiagnosed,<sup>5,6</sup> especially in the elderly<sup>7</sup> who are the chief users of these agents.

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## Reply

SIR.—We thank Dr Montgomery for his comments about a possible difference between bleeding and non-bleeding ulcer. For bleeding ulcers there were nine pairs in which one member took NSAIDs regularly and the other none at all; seven were patients and two controls giving an odds ratio of 3.5. In the nine non-bleeding such pairs, eight were patients and one was a control (OR=8).

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