

have been reopened if the *JME* had not intervened. I congratulate the *JME* for taking the bull by the horns – and I congratulate the *BMJ* for changing its practice and ceasing to send rejected letters on to other authors.

References

- 1 Gupta VK. Should intellectual property be disseminated by forwarding rejected letters without permission. *Journal of Medical Ethics* 1996; **22**: 243–4.
- 2 Craft N, Smith R. BMJ response to Gupta. *Journal of Medical Ethics* 1996; **22**: 245–6.
- 3 Anderson A. Plagiarism charge casts shadow on peer review. *Nature* 1989; **340**: 173.
- 4 Lock S. Misconduct in medical research. *British Medical Journal* 1988; **297**: 1531–5.
- 5 Fisher M, Sandler D. Editorial practice. *British Medical Journal* 1993; **306**: 1346.

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Thirst and hydration in palliative care

SIR

I write to correct an error in my recent paper in your journal,¹ and to clarify and expand a point relating to the physiology of thirst.

Author's error: Introduction, line 11, page 147: for six papers, read four

papers.

Physiology of thirst: The physiological control of thirst is extremely complex, and my knowledge of it rather rusty. In touching on the subject I have made a statement that is misleading. On page 148 of my paper¹ in the section on “The question of thirst” I wrote: “Does severe dehydration suppress thirst in cancer patients as it does in the healthy elderly?” In fact it is probably not dehydration that suppresses thirst in the elderly, but suppression of thirst that predisposes to dehydration.² Phillips *et al* showed reduced thirst during fluid deprivation in seven healthy elderly men, compared with seven healthy young men.² The reason for this was not clear but the authors postulated diminished baroreceptor and volume receptor mediated thirst since levels of the peptide hormone vasopressin, which is linked with osmoreceptors³ were not reduced. However, certain odd features in the study suggested that cognitive factors were involved, since thirst levels that were suppressed during fluid deprivation, rose during a subsequent “sham” intravenous infusion.² Therefore the knowledge that one cannot have access to fluids, may lead to thirst suppression. The important point however is that the combination of dehydration and thirst suppression, whatever the mechanism, is potentially lethal, and could indeed lead to “an escalating spiral of decline”.¹

In the context of a possible reduction in thirst perception in the dying¹ it is of interest that loss of osmotic thirst has been reported in patients

with multiple system atrophy.³ It is also of interest that opiates play a part in the control of vasopressin secretion,⁴ as may prostaglandins.⁵ Whether this alters thirst perception I do not know, but clearly morphine and other pain-killers used in palliative care could influence fluid-balance control in unpredictable ways.

References

- 1 Craig GM. On withholding artificial hydration and nutrition from terminally ill sedated patients. The debate continues. *Journal of Medical Ethics* 1996; **22**: 147–53.
- 2 Phillips P, Rolls BJ, Ledingham JGG, *et al*. Reduced thirst after water deprivation in healthy elderly men. *New England Journal of Medicine* 1984; **311**: 753–9.
- 3 Bevilacqua M, Norbiato G, Righini V, *et al*. Loss of osmotic thirst in multiple system atrophy: association with sinoaortic baroreceptor deafferentation. *American Journal of Physiology* 1994; **266**: 1752–8.
- 4 Aziz L, Forsling ML, Woolf CJ. The effect of intracerebroventricular injections of morphine on vasopressin release in the rat. *Journal of Physiology* 1981; **311**: 401–9.
- 5 Craig GM. Prostaglandins, possible mediators of the effects of oestrogens on luteinizing hormone output. *Medical Hypotheses* 1976; **2**: 116–20 (references 61–65).

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