Correspondence

EDITED BY TOM FAHY

Suicide and the cost-effectiveness of antidepressants

Sir: Hotopf *et al* (1996) reason that while the selective serotonin reuptake inhibitors (SSRIs) are safer in overdose than the older tricyclic antidepressants (TCAs), such an advantage is unlikely to influence overall cost-effectiveness of treatment given that the incidence of suicide is very low. I have recently published figures which contradict this argument.

Currently, the total number of suicides and undetermined deaths in the UK is close to 6000 per annum. It is widely accepted, however, that official statistics for suicide mortality substantially underestimate the true rate (O'Donnell & Farmer, 1995). From my calculations, if one accepts that approximately 70% of suicides are depression-related, then depressive illness is implicated in approximately 4000 deaths per annum (Henry, 1995). I have made the assumption that, of these, 600 or so will be prescribed an antidepressant, since only 15% of depressed patients are ever recognised. Therefore, because the number of antidepressant-related suicides is around 300 deaths per annum, it can be seen that the actual risk of death from overdose in patients prescribed antidepressants may be as much as 10 times greater than crude estimates suggest (Edwards, 1995). Thus, the suicide rate from antidepressant overdose among depressed patients prescribed an antidepressant might possibly be as high as 50%. Furthermore, most deaths from overdose are due to TCAs, with over 80% of these deaths being due to two of those drugs, amitriptyline and dothiepin (Henry *et al*, 1995).

Therefore, although death from antidepressant overdose accounts for a small proportion of all suicides, TCAs are responsible for a high proportion of those suicides which occur in patients prescribed an antidepressant. I am somewhat dismayed that a paper purporting to compare the cost-effectiveness of SSRIs and TCAs should take a superficial view of such a highly complex subject, and in so doing, proffer what can only be regarded as a specious argument.

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Henry, J. A. (1996) Suicide risk and antidepressant treatment. *Journal of Psychopharmacology*, **9**, 39–40.

—, Alexander, C. A. & Sener, E. K. (1995) Relative mortality from overdose of antidepressants. *British Medical Journal*, **310**, 221–224.

Hotopf, M., Lewis, G. & Normand, C. (1996) Are SSRIs a cost-effective alternative to tricyclics? *British Journal of Psychiatry*, **168**, 404–409.

O'Donnell, I. & Farmer, R. (1995) The limitations of official suicide statistics. *British Journal of Psychiatry*, **166**, 458–461.

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Authors' reply: The tragedy of suicide in patients taking antidepressants makes the tricyclic antidepressants (TCAs) a far less attractive option to prescribers. If Henry's 'back of envelope' calculations are correct, and 50% of completed suicides in those taking antidepressants use antidepressants as their suicide method, one could ask what proportion of people one would need to treat to prevent a single suicide, assuming that giving them a different drug would avert all suicides. For example, assuming the suicide rate per annum is 8 per 100 000, and assuming the relative risk of suicide in *treated* depressed patients is 25, their rate would be 200 per 100 000, of which 100 cases would use antidepressants. To prevent one such death 1000 patients would have to be treated with SSRIs, assuming no substitution. With the current costs of SSRIs still far exceeding those of the tricyclics this is likely to remain a costly approach. For example, if a month's supply of amitriptyline (150 mg) costs £1.53, and one month's supply of fluoxetine is £20.77 (*British National Formulary*, March 1996), the increased cost of a year's treatment of fluoxetine is about £230. The cost for 1000 patients would be £230 000. For sertraline (100 mg) we calculate this cost rises to over £440 000.

These calculations are crude, and our main point in the original paper was that the impact of SSRIs in preventing rare events is very difficult to assess. Clearly the cost per life saved will depend on the increased risk of suicide. We would not argue that those assessed to be at risk should not be prescribed SSRIs. The question is whether SSRIs should be given as first-line treatment to everyone who presents with depression. Thus the argument is more to do with costs and benefits at a population level. If policy decides that TCAs should not be prescribed because of serious risk to public health in terms of suicide, one must ask how much the alternatives cost. If, as Freemantle *et al*'s (1994) model suggests, the cost per life years saved from suicide of widespread use of SSRIs is £50 000 this is an unprecedently costly *preventive* intervention. In reality, patients who are prescribed SSRIs appear to commit suicide more often than those prescribed TCAs (Jick *et al*, 1995). Assuming this is due to selection bias (i.e. doctors who recognise patients as suicidal give them an SSRI) this implies two things are happening: first, doctors already prescribe SSRIs to those with increased suicidal risk; and second, patients substitute tablets for alternative methods.

The arguments are not simple, but suicide is fortunately a rare event and one which we would argue is unlikely to make big impacts in the cost-effectiveness of the treatments, despite the obvious emotive argument.

Freemantle, N., House, A., Song, F., et al (1994) Prescribing selective serotonin reputake inhibitors as a strategy for prevention of suicide. *British Medical Journal*, **309**, 249–253.

Jick, S. S., Dean, A. D. & Jick, H. (1995) Antidepressants and suicide. *British Medical Journal*, **310**, 215–218.

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Inappropriate antidiuretic hormone secretion and SSRIs

Sir: Voegeli & Baumann (1996) observed hyponatraemia in an elderly depressive patient treated with the SSRI citalopram.

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