

Richard Turner, Richard Horton  
*The Lancet*, London NW1 7BY, UK

- 1 Laming. The Victoria Climbié inquiry: report of an inquiry by Lord Laming. January, 2003. <http://www.victoria-climbié-inquiry.org.uk/finreport/finreport.htm> (accessed Nov 13, 2008).
- 2 BBC News Channel. Men found guilty of baby's death. Nov 11, 2008. <http://news.bbc.co.uk/1/hi/england/london/7706598.stm> (accessed Nov 17, 2008).
- 3 Gilbert R, Spatz Widom C, Browne K, Fergusson D, Webb E, Janson S. Burden and consequences of child maltreatment in high-income countries. *Lancet* 2008; published online Dec 3. DOI:10.1016/S0140-6736(08)61706-7.
- 4 Gilbert R, Kemp A, Thoburn J, et al. Recognising and responding to child maltreatment. *Lancet* 2008; published online Dec 3. DOI:10.1016/S0140-6736(08)61707-9.
- 5 MacMillan HL, Wathen CN, Barlow J, Fergusson DM, Leventhal JM, Taussig HN. Interventions to prevent child maltreatment and associated impairment. *Lancet* 2008; published online Dec 3. DOI:10.1016/S0140-6736(08)61708-0.
- 6 Reading R, Bissell S, Goldhagen J, et al. Promotion of children's rights and prevention of child maltreatment. *Lancet* 2008; published online Dec 3. DOI:10.1016/S0140-6736(08)61709-2.

## The spurious advance of antipsychotic drug therapy

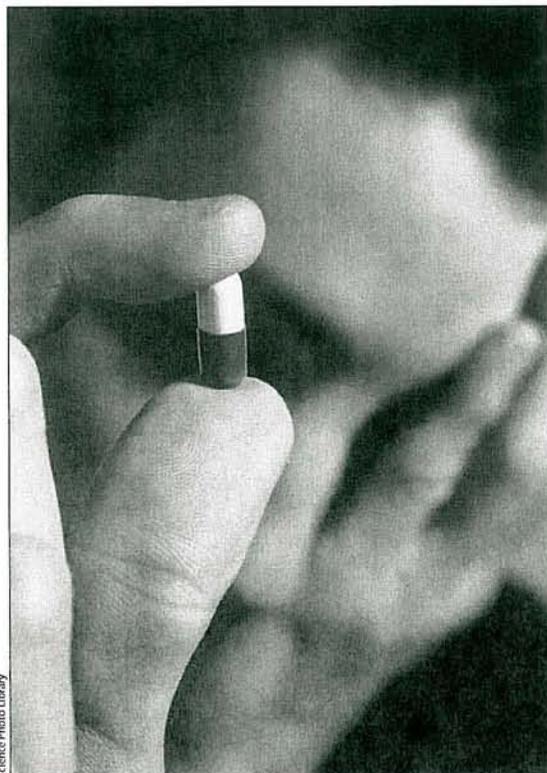
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Clinicians are familiar with studies that claim to show major advances in therapy. They tend to greet early reports of such advances with a touch of scepticism and wait, usually for at least 10 years, for a raft of independent studies that show that the advance is genuine and not just another minor ripple in the treatment stream. In *The Lancet* today, Stefan Leucht and colleagues<sup>1</sup> deviate from this pattern by suggesting that what was seen as an advance 20 years ago—when a new generation of antipsychotic drugs with additional benefits and fewer adverse effects was introduced<sup>2</sup>—is now, and only now, seen as a chimera that has passed

spectacularly before our eyes before disappearing and leaving puzzlement and many questions in its wake.

Leucht and colleagues' analysis of ten outcomes from 150 randomised trials, supported by some powerful studies,<sup>3,5</sup> shows that the name "second-generation antipsychotics" is inaccurate. This group of drugs is in fact a heterogeneous mix of compounds, with some superior to others. Antipsychotic drugs differ in their potencies and have a wide range of adverse-effect profiles, with nothing that clearly distinguishes the two major groups. Importantly, the second-generation drugs have no special atypical characteristics that separate them from the typical, or first-generation, antipsychotics. As a group they are no more efficacious, do not improve specific symptoms, have no clearly different side-effect profiles than the first-generation antipsychotics, and are less cost effective.<sup>6-8</sup> The spurious invention of the atypicals can now be regarded as invention only, cleverly manipulated by the drug industry for marketing purposes and only now being exposed. But how is it that for nearly two decades we have, as some have put it,<sup>9</sup> "been beguiled" into thinking they were superior?

Leucht and co-workers provide some clues. Of 150 trials in their meta-analysis, in 95 the second-generation antipsychotic was compared with the high-potency first-generation antipsychotic haloperidol. The use of haloperidol as the first-generation antipsychotic in these trials means that they were biased in favour of the second-generation drugs. This bias has been achieved through several routes—eg, by comparing the second-generation antipsychotic with a high-potency first-generation antipsychotic likely to be associated with a high rate of extrapyramidal side-effects. Another obvious way of favouring the second-generation drugs has been to avoid comparison with a medium-potency first-generation antipsychotic, because these drugs are



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likely to be just as efficacious as the second-generation drug, but less likely than haloperidol to induce Parkinsonism. The picture can be complicated further with high doses of the first-generation drug. This approach favours the second-generation antipsychotic because side-effect rates are much lower than with the first-generation antipsychotic.<sup>10</sup> Moreover, there is often selective publication of trials<sup>11-13</sup> that can skew the evidence base in favour of a drug favoured by the investigators. On present evidence from all sources it is difficult not to conclude that the trials of the second-generation antipsychotics seem to be driven more by marketing strategy than to clarify their role for clinicians and patients.

This is not to say that all antipsychotic drugs are the same, they are not. Individual responses vary, and so a range of drugs is needed for good clinical practice. So where should we go now? First, the time has come to abandon the terms first-generation and second-generation antipsychotics, as they do not merit this distinction. The only second-generation antipsychotic that is obviously better than other drugs in resistant schizophrenia is clozapine,<sup>14</sup> and this is a very old drug indeed. Second, clinicians must remember to keep the benefit-risk ratio of each antipsychotic drug in constant perspective because all are associated in different ways with serious adverse effects, which should be important outcome measures.<sup>13</sup> Finally, it is prudent to remember that although science rules during a drug's development, the market usurps control once the drug is released for care of patients.

\*Peter Tyrer, Tim Kendall

Department of Psychological Medicine, Imperial College London, London W6 8RP, UK (PT); and National Collaborating Centre for Mental Health, Royal College of Psychiatrists' Research Unit, London, UK (TK)  
p.tyrer@imperial.ac.uk

PT declares that he has no conflict of interest. TK is involved in updating the schizophrenia guideline for the National Institute for Health and Clinical Excellence, including a review of antipsychotic drugs in the treatment of schizophrenia.

- 1 Leucht S, Corves C, Arbter D, Engel RR, Li C, Davis JM. Second-generation versus first-generation antipsychotic drugs for schizophrenia: a meta-analysis. *Lancet* 2008; published online Dec 5. DOI:10.1016/S0140-6736(08)61764-X.
- 2 Janssen PA, Niemegeers CJ, Awouters F, Schellekens KH, Megens AA, Meert TF. Pharmacology of risperidone (R 64 766), a new antipsychotic with serotonin-5<sub>2</sub> and dopamine-D<sub>2</sub> antagonistic properties. *J Pharmacol Exp Ther* 1988; **244**: 685-93.
- 3 Lieberman JA, Stroup S, McEvoy JP, et al, for the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Investigators. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *N Engl J Med* 2005; **353**: 1209-23.
- 4 Jones PB, Barnes TR, Davies L, et al. Randomized controlled trial of effect on quality of life of second- vs first-generation antipsychotic drugs in schizophrenia: Cost Utility of the Latest Antipsychotic Drugs in Schizophrenia Study (CULASS 1). *Arch Gen Psychiatry* 2006; **63**: 1079-87.
- 5 Keefe RS, Bilder RM, Davis SM, et al, for the CATIE Investigators and the Neurocognitive Working Group. Neurocognitive effects of antipsychotic medications in patients with chronic schizophrenia in the CATIE trial. *Arch Gen Psychiatry* 2007; **64**: 633-47.
- 6 Rosenheck RA, Leslie D, Sindelar J, et al, for the CATIE Study Investigators. Cost-effectiveness of second generation antipsychotics and perphenazine in a randomized trial of treatment for chronic schizophrenia. *Am J Psychiatry* 2006; **163**: 2080-89.
- 7 Davies LM, Lewis S, Jones PB, et al, on behalf of the CULASS team. Cost-effectiveness of first- v. second-generation antipsychotic drugs: results from a randomised controlled trial in schizophrenia responding poorly to previous therapy. *Br J Psychiatry* 2007; **191**: 14-22.
- 8 Lewis S, Lieberman J. CATIE and CULASS: can we handle the truth? *Br J Psychiatry* 2008; **192**: 161-63.
- 9 Vedantam S. In antipsychotics, newer isn't better. *Washington Post (Washington)* Oct 3, 2006. <http://www.washingtonpost.com/wp-dyn/content/article/2006/10/02/AR2006100201378.html> (accessed Sept 8, 2008).
- 10 Geddes J, Freemantle N, Harrison P, Bebbington P. Atypical antipsychotics in the treatment of schizophrenia: systematic overview and meta-regression analysis. *BMJ* 2000; **321**: 1371-76.
- 11 Turner EH, Matthews AM, Linardatos E, Tell TA, Rosenthal R. Selective publication of antidepressant trials and its influence on apparent efficacy. *N Engl J Med* 2008; **358**: 252-60.
- 12 Whittington CJ, Kendall T, Fonagy P, Cottrell D, Cotgrove A, Boddington E. Selective serotonin reuptake inhibitors in childhood depression: systematic review of published versus unpublished data. *Lancet* 2004; **363**: 1341-45.
- 13 Tungeraza T, Poole R. Influence of drug company authorship and sponsorship on drug trial outcomes. *Br J Psychiatry* 2007; **191**: 82-83.
- 14 Kane J, Honigfeld G, Singer J, Meltzer H. Clozapine for the treatment-resistant schizophrenic: a double-blind comparison with chlorpromazine. *Arch Gen Psychiatry* 1988; **45**: 789-96.

## Assessing bleeds clinically: what's the score?

Acute upper-gastrointestinal haemorrhage is the most common life-threatening medical emergency faced by gastroenterologists, with an annual incidence of 50-150 per 100 000 people.<sup>1</sup> Mortality has been stubbornly high (14% in 1995), although a reaudit in 2007 by the British Society of Gastroenterology showed a UK mortality of 10%.<sup>2</sup> That reaudit identified several trends, including a doubling of cases due to

variceal bleeding and a striking reduction in the use of surgery. Whether the falling mortality reflects improved management or an altered case-mix is not clear. Certainly, several mild cases do not undergo endoscopy or need blood transfusion.

Measures need to be developed to identify patients at low risk, who can be discharged early or for whom admission can be avoided, as well as to improve



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