Research misconduct: lessons to be learned?

Michael 2007;4:7-9

"It can never happen here" has been the traditional saying in Norway when incidents of scientific dishonesty have been disclosed around the world. In a small country with a limited number of medical researchers, traditions for transparency and a strong belief in honesty, there has been a more or less naïve attitude to fraud and research misconduct.

When in January 2006, on Friday 13th (!), the news was broken that a Norwegian scientist at Rikshospitalet-Radiumhospitalet, Jon Sudbø, had admitted to research misconduct in a recently published paper in *The Lancet* (1), it became a national sensation. The case made headline news in all major newspapers and television networks, more than 330 media reports were registered over the first two weeks and the case received huge international attention.

At an early stage it became evident that the actual case, widely known as the Sudbø case, included fabrication of data, and a special Commission was appointed on 18 January to conduct an independent investigation. The Commission chaired by the Swedish epidemiologist, Professor Anders Ekbom, then presented an extensive report on 30 June 2006 (2).

"The bulk of Jon Sudbø's scientific publications are invalid due to the fabrication and manipulation of the underlying data material", read the main conclusion of the Commission. Based on investigations into the entire body of Sudbø's scientific work, 38 published papers, the Commission found several breaches of good scientific practice. Jon Sudbø, a dentist and physician, had been doing research on the early stages of oral cancer. One of his main questions was whether and to what extent different types of leukoplakia could predict the risk for developing oral cancer. Sudbø's results had been published in high-profile international journals (1,3,4) and formed the basis for his PhD thesis. A series of flaws were, however, found

in his data material and the summing up by the Commission was harsh: "The Commission is of the opinion that the errors and defects that have been exposed are too numerous, too great and too obvious to be attributed to random errors, incompetence or the like; and that the raw data therefore appear to have been fabricated, manipulated and adapted to the desired findings"(2).

The Sudbø case has been intensively discussed within the health care sector in Norway over the last year, and has undoubtedly led to an increase in the awareness of research misconduct. Many institutions have reconsidered their research programmes and routines. Supervisory and regulatory systems have been introduced.

The Sudbø case is also of interest from an international perspective. Learning from adverse events is a way to improve quality in all parts of medicine - research as well as patient treatment. What lessons can be learned by this and other revealed cases of scientific fraud for researchers, research institutions, scientific journals, and other parties? Is a more detailed bureaucratic regulation of research the inevitable consequence? Can misconduct be prevented through information campaigns? And who is really responsible for the quality of published research?

These questions were raised at a one day international conference in Oslo, 8 December 2008. The conference was organised by *Helsebiblioteket* (The Norwegian Electronic Health Library)/The Norwegian Knowledge Centre for the Health Services, *The Lancet*, and the *Norwegian Medical Society* and attended by more than 100 researchers, clinicians and health administrators.

The presentations from the conference are published in this issue of *Michael* with financial support from *The Norwegian Research Council* and the *Norwegian Ministry of Education and Research*.

References

- 1. Sudbø J, Lee JJ, Lippmann SM et al. Non-steroidal anti-inflammatory drugs and the risk of oral cancer: a nested case-control study. *Lancet* 2005; 366: 1359 66.
- Report from the Investigation Commission appointed by Rikshospitalet–Radiumhospitalet MC and the University of Oslo January 18, 2006. June 30, 2006:http://www.rikshospitalet.no/content/res_bibl/6876.pdf (accessed Feb 15, 2007).
- 3. Sudbø J, Kildal W, Risberg B et al. DNA content as a prognostic marker in patients with oral leukoplakia. *N Engl J Med* 2001;344:1270-8.
- 4. Sudbø J, Bryne M, Johannessen AC et al. Comparison of histological grading and largescale genomic status (DNA ploidy) as prognostic tools in oral dysplasia. *J Pathol* 2001;194:303-10.

Magne Nylenna Editor Helsebiblioteket (Norwegian Electronic Health Library) PO Box 7004 St Olavs plass N-0130 Oslo Norway and Professor of community medicine Department of Public Health and General Practice Norwegian University of Science and Technology N-7489 Trondheim Norway magne.nylenna@helsebiblioteket.no