EDITORIAL II

BJA citation classics 1945–1992

It is perhaps a common fault of the British that they spend too long looking at their distinguished past rather than planning for an innovative future. Nevertheless, 1998 marks the 75th anniversary of publication of the British Journal of Anaesthesia and the editorial board asked the Institute for Scientific Information (ISI) to undertake a search for the 50 most cited publications from 1945 until the end of 1992. These citation classics are listed in rank order at the end of this editorial (51 publications are cited as there was a joint 50th position).

There is considerable debate about the value of citation indices. The simple assumption is that citations reflect the use of the document and its impact on the specialty. Furthermore, they are used increasingly to assess scientific performance and even as an aid to determining scientific policy. There is little doubt that authors are increasingly aware of the “ratings” of the anaesthetic journals when submitting manuscripts. Sceptics argue that citation counts provide no estimate of the quality of a publication, emphasize that there is no satisfactory theory to explain citation indices and doubt the evaluations based on them. In spite of these opposing views, I believe that the BJA citation classics provide a fascinating insight into the development of anaesthetic practice since 1945.

Some of my preconceived ideas about the probable content of the list had to be revised. I was surprised by the international nature of the contributions at a time when the journal did not seek deliberately a global role. Citation classics originated from the USA, Canada, Australia, South Africa, Germany, Denmark, Sweden, Finland and Israel: in total approximately one-third of manuscripts. I also expected that there would be many review articles in the citation classics. However, basic research articles predominated, although there were reviews on: the pharmacokinetics of local anaesthetic drugs (No. 9); solubility coefficients for inhaled anaesthetics (No. 14); clinical assessment of neuromuscular transmission (No. 38); benzodiazepines (No. 42); and the physiology of cerebral blood flow (No. 49). Several citation classics describe the introduction of important new drugs: halothane in 1956 (No. 4); pancuronium in 1967 (Nos 33); propranolol in 1967 (No. 27); diazepam in 1970 (Nos 16 and 42); Althesin in 1971 (No. 8); and atracurium in 1981 (Nos 6 and 12). The importance of unpredictable adverse responses to commonly used anaesthetic agents is highlighted by the classic articles on malignant hyperthermia (Nos 2, 11 and 13), histamine release after i.v. drugs (Nos 19, 25 and 26) and nitroprusside metabolism (No. 30).

Nearly 25% of the articles describe investigations into respiratory and cardiovascular aspects of anaesthesia. This probably reflects the importance of these subjects in past decades, but it is also coincident with the observation that citation classics occur most commonly 20–25 yr after publication. It is interesting, therefore, to examine those classics which have achieved recognition over a prolonged period of time or very quickly.

Three classics were published more than 35 yr before the end of the search, that is before 1957 (Nos 4, 5 and 47). These articles describe the clinical evaluation of halothane (1956), elimination of rebreathing in various semi-closed anaesthetic systems (1954) and EEG changes produced by thiopental (1951), respectively. The citation search revealed that all three articles were quoted in 1992, and Mapleson’s paper on five occasions. Indeed, the sustained contribution of Mapleson to anaesthetic research is remarkable; he last published in this journal in 1997. At the other end of the time scale, six articles achieved classic status within 12 yr of publication, 1980 or later. Two describe the pharmacology of atracurium (Nos 6 and 12) and two are concerned with the efficacy of extradural morphine (No. 7) and its complications (No. 3). The remainder are a review of the monitoring of neuromuscular transmission (No. 38) and the pharmacokinetics of fentanyl and alfentanil (No. 48). There are some obvious similarities between the old and new classics: clinical evaluation of new agents, description of the elimination of anaesthetic drugs (gases) and the novel central nervous system effects of existing drugs. The importance of extradural opioids in modern practice is mirrored by the rapid achievement of classic status of the contributions from Sweden (No. 3) and Israel (No. 7).

This list defines the top 50 cited publications at the end of 1992 and so must be considered a “snapshot” of the BJA literature. Changes are inevitable, and the search showed that some classics had not been cited in the past 2 yr. It was notable, however, that many publications in the top half of the list were cited frequently in 1992 (Nos 1, 3, 4, 5, 8, 9, 14, 16 and 17) and so are likely to remain classics for some time.

It was an enjoyable task to read all the manuscripts. I was struck not only by the marked changes in anaesthetic and surgical practice, but also in the design and conduct of clinical research. Gastric surgery was commonplace and used frequently as a model for upper abdominal procedures. In one study, 90% of patients were smokers (No. 36). Ethics Committees and informed consent were rarely mentioned, randomization and blinding often omitted, and when statistical analysis was undertaken it was unusual for the test to be described. Conversely, great emphasis was often placed on the accuracy and precision of the physiological measurements, and the number of patients studied was usually large (173 in No. 31 and 265 in No. 46). The articles were often lengthy, with a discussion that ranged freely around the subject and so allowed the development of further ideas. In contrast, Harrison succinctly described the successful use of dantrolene in malignant hyperthermia in five pigs in two pages (No. 13). It is probable that some of these classics would not survive rigorous assessment in 1998 and
yet they represent the standard of the time, and their value to anaesthesia is beyond doubt.

The editor-in-chief has chosen 12 articles from the list of citation classics and one will be reproduced in each issue of the journal in 1998, followed by a short commentary on the importance of the work. The editorial board hope that this brief bout of nostalgia will be an interesting addition to the usual articles. The board will strive to continue to serve both readers and authors as we work towards the centenary in 2023.

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Citation classics
37. Macdonald AG, McNeill RS. A comparison of the effect on


45. Tammisto T, Airaksinen M. Increase of creatine kinase activity in serum as sign of muscular injury caused by intermittently administered suxamethonium during halothane anaesthesia. *British Journal of Anaesthesia* 1966; 38: 510–515. [111 citations]


