

## Anesthesiology Journals and their Scientific Contribution: An Overview of Published Studies

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### Abstract

The objective of this short communication was to reiterate the role of anesthesiology journals in informed decision making by summarizing studies on analyses of those journals found in PubMed database. There were five studies analyzing anesthesiology journals, three on authorship and two on randomized controlled trials. Whilst the two authorship studies reported increase in Chinese contribution, one authorship study reported decline in American contribution. The two studies on RCTs had emphasized improved quality of reporting which is needed in anesthesiology journals.

**Keywords:** Evidence analysis; Journal analysis; Evidence-based anesthesiology; Publication policies.

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### Country-specific Contribution

Two studies by Li *et al*[1] and Li *et al*[2] analyzed 17 journals for articles from East Asia (Japan, China, and South Korea) and found 3076 research articles. China and Korea had moderate increase in number of articles while Japan had decreasing trend. China had more citation index for its articles and Anesthesia & Analgesia published more articles from this region.

Szokol *et al* reviewed three leading anesthesia journals (Pain, Anesthesiology, and Anesthesia & Analgesia) for American contribution in authorship. The proportion of American publications was found to be decreasing over the period 1980-2000. Multiple factors such as American publication in journals other than these journals, and the increased quality of submissions from other countries might have influenced these

findings.[3]

### Quality of Randomized Controlled Trials

Greenfield *et al* reviewed four anesthesiology journals (Anesthesiology, Anesthesia & Analgesia, Anaesthesia, and Canadian Journal of Anaesthesia) and performed quality evaluation of RCTs using a validated assessment tool, and overall quality score was found as 44%. Quality scores were higher for appropriate controls and discussions of side effects and were lower for randomization blinding, blinding observers to results, and post-beta estimates. 32%

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of RCTs did not report important pretreatment clinical predictors.[4]

Greenfield *et al* reviewed four anesthesiology journals (Anesthesiology, Anesthesia & Analgesia, Anaesthesia, and Canadian Journal of Anesthesia) and found 200 randomized controlled trials (RCTs) out of 2164 articles published in 2006. The Quality scores were found to be improved from the year 2000 to 2006, with improvements in reporting of sample size estimates, major end-points, and discussion of side effects. Suboptimal reporting was evident for randomization blinding, observer blinding to continuing studies, and post-beta estimates in trials with negative outcomes.[5]

There were five studies analyzing anesthesiology journals, three on authorship and two on randomized controlled trials. Whilst the two authorship studies reported increase in Chinese contribution, one authorship study reported decline in American contribution. The two studies on RCTs had emphasized improved quality of reporting which is needed in anesthesiology journals.

The retrieved studies inherently involve two types of bias, firstly- author-specific; the authors of first two studies are the same (both the studies appear identical), so are those of the last two (one is an update of the other). Secondly, journal-specific bias was also found; of

the five articles found, four were published in Anesthesia and Analgesia, and only one article was from Journal of Anesthesia.

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