A flagrant case of scientific fraud

Un estrepitoso caso de fraude científico

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Scientific fraud is a reality, and although its frequency is not known, it is suspected to be far more common than actually detected.

Recently, a case has been identified that has had a great impact, and which has required the withdrawal of 88 articles published by Dr. Joachim Boldt in international journals (Annex 1). The triggering event was a series of denouncing letters, following the publication of an article (Joachim Boldt, Stephan Suttner, Christian Brosch, Andreas Lehmann, Kerstin Röhm, Andinet Mengistu. Anesthesia & Analgesia 2009;109:1752-62), reporting the suspected fraudulent generation of data. This led to an investigation and to the request for proof from Dr. Boldt, who failed to reply, and was thus unable to refute the accusations. The investigation was in turn extended to other publications in which he appeared as first signing author or as co-author, and resulted in the withdrawal of 88 articles—all in the setting of Intensive Care Medicine and Anesthesia.

The fundamental reason for the denouncement made by Steven L. Shafer, Editor-in-Chief of Anesthesia & Analgesia, was the lack of approval by the Ethics Committee—in this case the Landesärztekammer Rheinland-Pfalz—and the absence of randomization and of the signing of informed consent on the part of the patients. These publications were considered non-ethical, since their reference to the Ethics Committee had been falsified. At present a committee is conducting an investigation of the data in order to determine whether the findings of the articles are confirmed by the actual results obtained, apart from the issue of the falsification of approval from the Landesärztekammer Rheinland-Pfalz. Although there is information pointing to both the absence of patient randomization and the falsification of certain data, the results of the ongoing investigation to clarify the magnitude of the fraud are still pending. The situation may even have penal implications, as had already occurred in the case in Massachusetts involving the pain specialist Scott Reuben, who spent six months in prison.

This unfortunate situation involves aspects that generate morbid curiosity to which we do not wish to contribute; however, we consider that its importance justifies reporting the case to the readership of Medicina Intensiva.

We would like to use the opportunity to make some observations, which while already known, are no less pertinent—particularly at this time. We are referring to the reasons or motives, unjustifiable in all cases, which can lead to cases such as this one. The need to uphold personal prestige and ego among investigators may serve as an incentive for such fraudulent practices, though there are also more down to earth reasons such as curricular necessities or the obligation to obtain results that can serve to maintain or obtain institutional support to ensure continuity in the work of many investigators. Undoubtedly, another element to be taken into consideration is the implication of companies with enormous economical interests that can contaminate the relationship between scientists and business entities. In the case we are commenting, Dr. Bolt, whose study focused on hydroxyethyl starch, has conflicts of interest with several companies that produce the drug product. This relationship, while essential and strongly encouraged by the public health administrations, is fundamented upon a fragile balance in
which the oblige goal must be the search for truth. However, this objective is sometimes ambiguous, since there are many nuances, probably justified by a lack of biological uniformity, which explains why something that works in certain circumstances may not work in others—the tendency in such cases being to generalize things.

It is important to underscore that scientific fraud not only damages the credibility of the journal accepting the manuscript, but also its readers, who may base changes in their clinical practice on the conclusions drawn from the fraudulent study—with the potential risk this poses for patients.

To summarize, the present case must serve to reinforce our demands for transparency and for precise formal observation of the ethical norms, which are always the best guarantee of quality research.

Annex I.

List of articles withdrawn:

A.1. Acta Anaesthesiologica Scandinavica


A.2. Anaesthesia


A.3. Anästhesiologie Intensivmedizin Notfallmedizin Schmerztherapie


A.4. Anesthesia & Analgesia

- Boldt J, Wolf M, Mengistu A. A new plasma-adapted hydroxyethylstarch preparation: in vitro coagulation...
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- Piper SN, Röhm KD, Boldt J, Faust KL, Maleck WH, Kranke P, Suttner SW. Inspired oxygen fraction of 0.8 compared with 0.4 does not further reduce postoperative nausea and vomiting in dolasetron-treated patients undergoing laparoscopic cholecystectomy. Br J Anaesth. 2006;97:647–53.


A.9. Critical Care Medicine


A.10. Der Anästhesist


A.11. European Journal of Anaesthesiology

A.12. Intensive Care Medicine


A.15. Medical Science Monitor


A.16. Minerva Anestesiologica


A.17. The Thoracic and Cardiovascular Surgeon


A.18. Vox Sanguinis