

## Controversies in new technologies: how should a scientific journal stand?

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The paper of M. Putzier et al. “Charité total disc replacement—clinical and radiographical results after an average follow-up of 17 years”: Eur Spine J 2006 Feb;15(2):183–195, Epub 2005 Oct 28, created a lot of reaction and controversy, partially documented in the letters to the Editor and the answers published in Eur Spine J 2006, April;15(4):510–522. Specifically the authors of the original Charité disc used the opportunity to comment on the development and their own perception of the outcome of the first commercial available lumbar disc replacement. The letters to the Editor became quite voluminous, and it cannot be the function of a peer-reviewed journal to allow under the label of a letter to the Editor basically a scientific resume, which would normally not pass in a peer-review process. In this specific context—exceptionally—we allowed that, because the significance of the new technology of disc replacement is a major issue of today’s spinal care and spine surgery. Since these implants are gradually invading the spinal market for regular clinical use, a lot of controversy and debates

about the sense and nonsense of this new technology has been provoked.

It is today difficult to say, whether we are with a disc arthroplasty at the beginning of a glorious time of new spine care similar to what the total hip and knee replacement meant in hip and knee arthritis. Many elements of the today’s knowledge speak against that, however, there are elements and mainly hopes that there is coming up a better tool to deal with low back pain and neck pain in the context of degenerative disc disease. This dream is not new, since developments can be tracked back in the second-half of the last century. Whether we see presently a fundamental paradigm shift in the treatment of degenerative spinal diseases is questionable, and nobody can really answer that with a clear yes or no. Therefore, a journal like the European Spine Journal has the duty to allow this dispute and discussion in the open broader public of the spinal community, not only to be better informed, but also to stimulate thoughts and new innovations, which may finally benefit our patients.

The so-called evidence-based medicine and the failure of many different therapies in the treatment of low back pain have reduced in many surgeons the optimism and the hope that we can treat this patient collective with surgical tools. Therefore, a certain technology resistance is developing not only because it is difficult to imagine that new technology will address this complex issue, but also because increasing costs in health care will make it very difficult for new technology to stand the tests of time and of evidence. However, there is no medicine without the hope into improving our treatment modalities and tools to alleviate the suffering of our patients. The curiosity and the constant drive to do better for our

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patients are major ingredients to make this world better for patients, who are desperate for medical help.

Therefore, a modern society with a lot of potential for new technology and better approaches for the treatment of our patients has to remain open for new

approaches and methodologies to support progress. We cannot tolerate a paralyzing pessimism towards everything, which is new. Somebody will pick it up and if we as an academic journal of a learned society do not expose ourselves to this challenge, we may suddenly be off the window.