Surgery 163 (2018) 975

Contents lists available at ScienceDirect

Surgery

journal homepage: www.elsevier.com/locate/surg

Innovation

Editors' note

This submission by Ren et al is a follow-up to a mini-symposium we published in the July issue of SURGERY last year (2016) dealing with restoration of electrical continuity across the site of a complete transection of the spinal cord after a "head transplantation" referred to as a "cephalosomatic anastomosis (CSA)." As editors, we are well aware of the ethical questions raised about a so-called head transplant and have elected not to address this specific topic either here or in the mini-symposium. Actually, our curiosity (and our primary interest) arises from the science of restoration of neural continuity (and thus the possibility of true restoration of motor and sensory function), especially in the possibility of realistically restoring neural electrical continuity across the site of a prior traumatic spinal cord "transection" in patients with traumatic spinal paralysis. As you will see in the following paper by Ren et al from China, the ability to restore some element of electrical continuity across a site of complete spinal cord transection in a large animal model (dogs—done under very controlled conditions using a very sharp transection and a "Fusogen solution" of polyethylene glycol [PEG]), as they have reported previously in mice and rats, is extremely exciting. Please read this and look at the video online. We encourage you to keep an open mind about this topic of reconstruction of the traumatically severed spinal cord and the science of reinnervation.

We again want to stress that we at SURGERY are NOT condoning the practice of "head transplantation" at this time because of problems in some people's mind about the ethics, techniques, and selection of potential patients and some still unanswered questions about a chronic pain syndrome in humans. But when some of these questions have been addressed to the satisfaction of the scientific community, this concept of restoration of electrical continuity across the site of a previous traumatic spinal cord transection may very well offer a truly new, exciting, and potentially life-changing therapy for a large number of patients across the United States and other countries after a devastating injury to their spinal cord. Is this science that could result in a revolutionary change in spinal cord–injured patients?

To ensure transparency of the editorial process in SURGERY, this manuscript by Ren et al was reviewed by 4 members of our Editorial Board as well as by both of us. The paper went through 4 separate revisions before we, the editors, were confident that all approaches to protection of the animals involved were met in accordance with international guidelines of animal research and that the results reported were accurate and objective. One of our reviewers did not believe that we should publish this paper, and a commentary by this reviewer is included—actually, we are reproducing the exact ("confidential") comments to the editor with the approval of the reviewer, as well as the comments to the authors by the same reviewer. Also, the entire Editorial Board of SURGERY has discussed this topic on 3 occasions, and again, to ensure transparency, we acknowledge that not all the members of our Editorial Board were in support of or comfortable publishing these papers because of the contentious nature of the ethical discussion. As the editors, we acknowledge the very sensitive nature of this topic, but we maintain that the underlying science and the objective findings have the very real potential of introducing a new, life-changing therapy for many unfortunate patients with traumatic spinal cord injuries that have resulted in paralysis. Obviously, much more work needs to be done on this topic, but these experimental findings are very exciting and challenge our prior understanding of nerve regeneration. We encourage others to explore this fascinating topic as well.

Michael G. Sarr, MD
Rochester, MN
Kevin E. Behrns, MD
St. Louis, MO

https://doi.org/10.1016/j.surg.2017.11.003