three autopsy cases. Surprisingly, cerebellar damage in humans has for a long time been denied or minimized, in spite of definite and severe lesions reported in animal studies.

More than 2 years ago we drew attention to meningeal proliferation surrounding the electrodes and to serious cerebellar damage observed with the light and electron microscope in patients who underwent chronic electrical stimulation. We were surprised not to find a reference to our work in Dr. Robertson’s interesting paper.

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References

Response: We must apologize for not referring to the article by Manrique, et al., but we only became aware of their work a few months ago. Although only limited details of the electrode encapsulation and cortical damage were included in the Manrique report, there appears to be a number of similarities between the histological changes observed in their material and our cases. However, based on their schematic diagrams (Figs. 1 and 2), their biopsy specimens were obtained from lobule VII, which coincides to the area in our cases where the electrode wires left the cerebellum. A biopsy of this area does not necessarily reflect the type or extent of neuronal damage under the electrode arrays. All of our cases showed extensive neuronal injury in lobules VI and VII. We attributed the damage of this area to compression by the wires or damage to the arteries during the surgical exposure. Thus, the conclusion by Manrique, et al., that “the long continued stimulation time (15 min) and high frequency could explain our pathologic observations ...” is probably inappropriate.

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Control of Bone Bleeding

To the Editor: With regard to a recent report on a technique to control bone bleeding during the Cloward procedure (Rengachary SS, Manguoglu AB: Control of bone bleeding during Cloward procedure. Technical note. J Neurosurg 52:138–139, January, 1980), I would like to point out an earlier article in the Journal of Neurosurgery by Taheri on the use of Gelfoam paste as a hemostatic agent in anterior cervical fusion. Dr. Taheri reported on his personal use of this material in 300 anterior cervical fusions with excellent results. Since that time, I have used his technique in a large number of anterior cervical fusions, as have several of my colleagues in this community, with excellent results and no untoward effects.

Dr. Taheri’s technique is somewhat simpler to use than the one currently reported, and does not require the use of a thrombin solution, which has been known to cause allergic reactions.

I believe Dr. Taheri deserves the credit for the development of this simple but useful technique in anterior cervical fusion.

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Reference

Response: Our technique differs in two important respects from that described by Dr. Taheri. First, we use dry, compressed Gelfoam, which is ground into a paste in situ using the Cloward drill, and is driven into the cancellous bone that forms the floor and walls of the drill hole. This method, in principle, is superior to the manual application of Gelfoam paste, prepared with saline, to the side walls. The wet Gelfoam paste is likely to become diluted with the briskly oozing venous blood, and thus may not be as efficacious. Second, we use thrombin powder, which is delivered to the bleeding site in a highly effective concentration. Hemostasis is thus achieved by a combination of mechanical and pharmacological effects.

In the thousands of neurosurgical procedures performed using topical thrombin from bovine source, we and our colleagues at this institution have not encountered any anaphylactic reaction of the type described by Dr. Taheri. We do not believe that our technique is any harder to use than that described by Dr. Taheri.

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