Neurosurgical forum
Letters to the editor

Suprascapular Nerve Entrapment

To the Editor: Dr. Callahan and his coauthors have presented 27 suprascapular nerve decompressions in 23 patients, the largest series reported in the literature so far (Callahan JD, Scully TB, Shapiro SA, et al: Suprascapular nerve entrapment. A series of 27 cases. J Neurosurg 74:893-896, June, 1991). However, I do not fully agree with their indication for surgery, namely "posteriorlateral shoulder pain." Although the high rate of postoperative success is an argument in favor of the correct diagnosis, this shoulder pain may also improve and disappear with conservative therapy.

I have personally operated on 16 patients with suprascapular nerve entrapment using the same posterior approach. In contrast to the publication under discussion, all 16 had atrophy and weakness of supraspinatus and infraspinatus muscles, which I consider the crucial signs to recommend surgery to a patient. The authors observed atrophy and weakness in only 13 of their patients. I did not understand why only six of these 13 patients with atrophy and weakness had a "positive" electromyogram. All of our patients presented with the typical findings of a neurogenic lesion when these muscles were examined by electromyography.

Hans-Peter Richter, M.D.
University of Ulm
Guenzburg, Germany

Response: We appreciate Dr. Richter’s questions and comments. However, as is outlined in the paper, posteriorlateral shoulder pain is not the determinant used to offer surgery. Our patients undergo a medical history and physical examination, radiographic analysis if deemed appropriate, and electromyography (EMG) and diagnostic nerve block if suprascapular nerve entrapment is still in the differential diagnosis. If a diagnosis of suprascapular nerve entrapment is made, the patient is then started on 3 to 6 months of intensive conservative therapy including nonsteroidal anti-inflammatory drugs, analgesics, and physical therapy. Only if they fail conservative therapy are they offered surgery. The cases reported in our paper are only those that have failed conservative treatment. We did not include patients with suprascapular nerve entrapment who improved without surgery. However, if conservative treatment fails, we do not consider it necessary to wait until the patient has progressed to the point of muscular atrophy prior to offering surgical release.

As we mentioned in our paper, patients from the early part of the series frequently underwent EMG which was not designed to look specifically at the suprascapular nerve. Therefore, these studies may have been falsely negative. As we have become more cognizant of this disease entity we believe we have done a better job of confirming our diagnosis electrophysiologically. Diagnostic nerve block produced pain relief in 100% of patients clinically diagnosed as having suprascapular neuropathy. It is, of course, recognized that a suprascapular nerve block could relieve pain from intrinsic joint disease as well, so this must be kept in mind when evaluating these patients.

James D. Callahan, M.D.
Thomas B. Scully, M.D.
Scott A. Shapiro, M.D.
Robert M. Worth, M.D., Ph.D.
Indiana University Medical Center
Indianapolis, Indiana

Technique of Autoadrenal Transplantation

To the Editor: In a recent technical note (Hirsch JF, Sainte-Rose C: A new Surgical approach to Subcortical lesions: balloon inflation and cortical Gluing. Technical note. J Neurosurg 74:1014-1017, June, 1991), the authors describe a surgical approach to subcortical lesions that minimizes cortical damage. They did not refer to the open microsurgical technique developed in 1986 for Autoadrenal brain grafting to the caudate nucleus in the treatment of Parkinson's disease, and later implemented by many neurosurgeons worldwide for that purpose. The open microsurgical technique involves a ventricular approach, using an inflated surgical rubber-glove finger to separate the neural tissue exactly as described by Hirsch and Sainte-Rose and by Shahbabian, et al, whose experimental study we were unaware of until now.

With the same purpose of minimizing cortical damage, we originally developed the transcortical ventricular approach to remove intraventricular cysts. We have now refined the procedure to make it safer by using a double-lumen inflatable needle with a Teflon cannula and a tip that has several holes through which the cerebrospinal fluid (CSF) drains into the needle the moment the ventricle is reached. This principle has also been used in developing more sophisticated devices.

In our hands, the transcortical approach has allowed a fast easy access to the ventricle with minimal cortical damage. We have used this procedure in nearly 100 parkinsonian subjects and in hundreds of patients with neurocysticercosis; some of our patients have developed minor frontal electroencephalographic alterations, but no postoperative seizures. Very few patients developed a subdural collection of CSF, and those cases were transient and did not require surgical intervention.

J. Neurosurg. / Volume 75 / December, 1991
Postoperative computerized tomography and magnetic resonance imaging show only a small channel from the frontal cortex down to the ventricle.

IGNACIO MADRAZO, M.D., D.Sc.
Instituto Mexicano del Seguro Social
MEXICO CITY, MEXICO
REBECCA E. FRANCO-BOURLAND, PH.D.
Instituto Nacional de la Nutrición
MEXICO CITY, MEXICO

References

免责声明：上述引用文献由Drs. Madrazo and Franco-Bourland在他们的信件中引用，其中一位与气囊插管技术有关。这篇论文在1990年发表，但由于我们的文章未被提交。此外，忽略了可能发生的遗漏。例如，Drs. Madrazo and Franco-Bourland没有引用由Shahbabian，et al。3，who should be credited for the original description of the technique in animals, nor to our paper on the same topic,1 presented in 1988 and published in 1989 1 year before theirs. We actually began to use this technique in humans in 1983, but did not report our work at that time since Shahbabian, et al, had already written on the subject. We changed our mind in 1988 as we felt that the association of balloon inflation with ultrasound studies or stereotactic guidance in conventional open neurosurgery, followed by cortical glueing at the end of the procedure, constituted a new technique.

Drs. Madrazo and Franco-Bourland claim that, with balloon inflation, there were few postoperative subdural collections when the lateral ventricle is opened during surgery. This might be true in autodural brain-grafting procedures, with which we have no experience, but not in tumor removal. Thus, they might benefit from two aspects of our technical note: 1) the use of ultrasound study or of stereotaxy to guide the balloon needle toward the tumor, since their double-lumen system can only recognize the ventricle, and 2) the use of biological glue to close the surgical incision.

We are grateful to Drs. Madrazo and Franco-Bourland for demonstrating the usefulness of our technique.

JEAN-FRANCOIS HIRSCH, M.D.
CHRISTIAN SAINT-E-Rose, M.D.
Hôpital Necker-Enfants Malades
Paris, France

Odontoid Fractures
TO THE EDITOR: In the case report describing a vertical odontoid fracture (Bergenheim AT, Forssell A: Vertical odontoid fracture. Case report. J Neurosurg 74:665–667, April, 1991), the authors fail to present a convincing argument that the patient did in fact have such a fracture rather than a common Type I or Type II odontoid fracture. They propose that the patient suffered a vertical fracture through the entire dens in the coronal plane and suggest that this might have been caused by the impact of the anterior margin of the foramen magnum on the tip of the odontoid. Rather than illustrating the case with an axial computerized tomography (CT) scan through the mid or superior portion of the odontoid, the two images provided (Fig. 2) are through the base of the odontoid. Both are below the level of the anterior arch of C-1. The most inferior image (Fig. 2 right) shows a fracture line running across the base of the odontoid, almost dividing it into equal halves front and back. The second image (Fig. 2 left), still at a level below the anterior arch of C-1, shows the fracture line now very close to the anterior cortex. Looking at these two images, one would anticipate that the fracture will exit the anterior cortex 1 or 2 mm higher. This would simply be a slightly oblique common odontoid fracture.

Examination of the CT scout film (Fig. 3) and the lateral plain film (Fig. 1) shows a suggestion of a discontinuity of the anterior cortex of the odontoid about 2 mm above the level of the inferior edge of the anterior arch of C-1. This could well represent the most superior