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## Improved Head Support for Prone Myelographic and CT Examinations

Dennis Osborne

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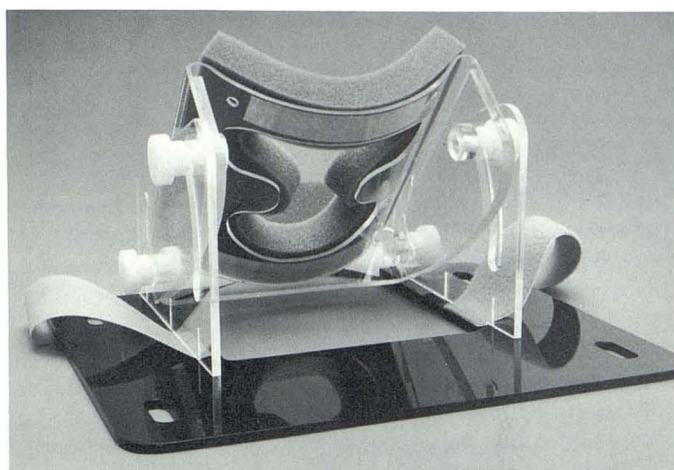
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## Improved Head Support for Prone Myelographic and CT Examinations

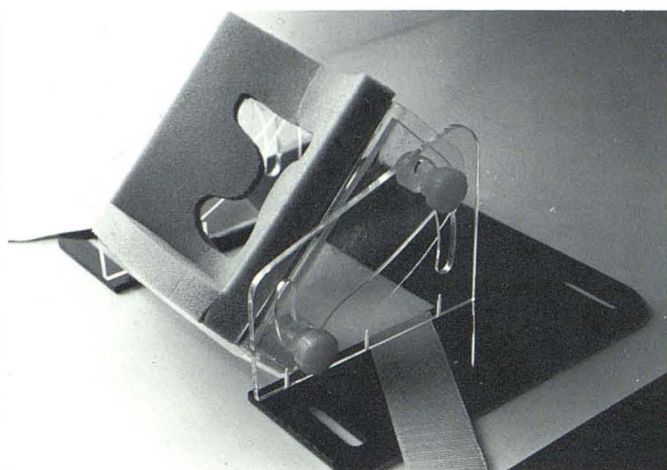
Dennis Osborne<sup>1</sup>

The prone position is essential for most myelographic examinations. Cervical myelography is usually performed in

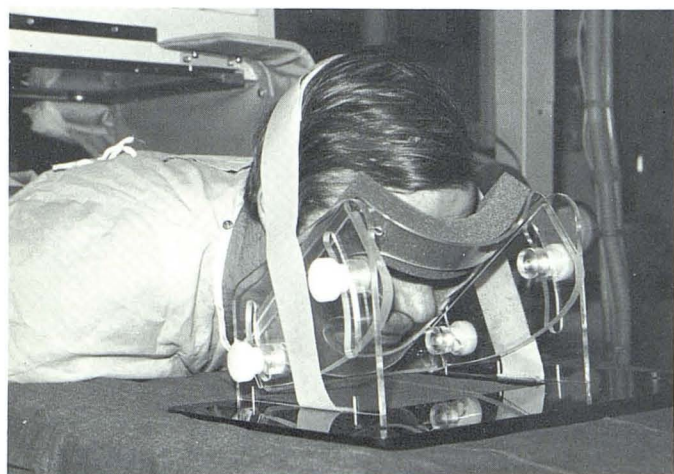
a prone position and requires carefully controlled head extension to maintain the contrast agent in the area of



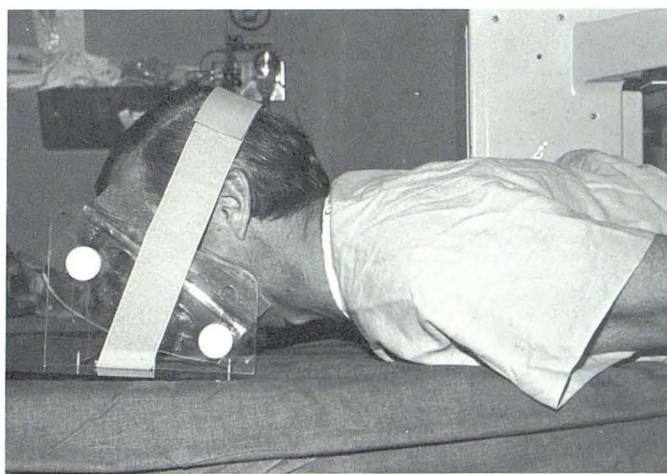
A



B



C



D

Fig. 1.—Adjustable prone position head support. Angled front (A) and back (B) views demonstrate thumb bolt adjustment of face piece, chin support, and Velcro straps that assist in maintaining head in desired position. A large base provides stability and good frictional contact with the x-ray tabletop. C and D demonstrate volunteer's comfortable position. The airway is unobstructed and good visual and auditory contact can be maintained with the patient. There is good operator access for cervical thecal sac puncture.

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<sup>1</sup> Department of Radiology, Box 3808, Duke University Medical Center, Durham, NC 27710.

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interest. Yet, the prone position is potentially very uncomfortable for patients and can occasionally compromise the airway. This can limit patient cooperation and can complicate an examination, especially when the patient is lying head down.

The Duncan head rest [1] has been modified to allow comfortable controlled hyperextension of the neck with the patient prone and with a good airway. (Both the original and modified units are manufactured by M. G. Equipment Co., St. Paul, MN.) The modified support is adjustable and allows the degree of head extension to be altered during a study to effect a more appropriate distribution of contrast agent (fig. 1). Velcro straps attached to the sides of the unit provide an additional control of head position. The large flat base of the head support produces good frictional contact with the tabletop and prevents it from slipping. Prone computed tomographic (CT) examinations are easily accomplished. The slight alterations in head position often necessary to clear patient artifacts when performing a prone CT examination can be readily obtained and maintained with this unit.

The head support has been used in over 250 patients without any problems. It is especially useful for lateral C1–C2 thecal sac puncture. It is radiolucent and does not affect radiographic techniques. The unit has been completely satisfactory for myelography and CT and may find a place in the operating room.

### Description of Head Support

The face piece of the original Duncan head rest was fashioned to support the forehead, chin, and cheeks and to ensure that the nose, eyes, and mouth were free and unobstructed. A foam pad cushion on the face piece provided some patient comfort.

The original head rest has been modified significantly (fig. 1). A strong plexiglass base and side supports have been added so as to allow the face piece angle to be adjusted. The angle of the face piece can be changed by altering its position with respect to the side supports and fixing the new position with four adjustable thumb bolts in slots between the side support and the sides of the original head rest. Velcro straps attached to the side supports assist in maintaining the head in the desired position. The foam pad cushion on the face piece has been thickened and a foam-covered chin piece have been added with a marked improvement in patient comfort.

### REFERENCE

1. Morris JL, Carl WS. A head rest for cervical myelography. *Radiology* 1980;135:228–229