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Use of a cervical spine collar during MR studies.

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CORRESPONDENCE

Abbreviated Reports

Use of a Cervical Spine Collar During MR Studies

MR studies are highly sensitive to patient motion, which can, at the extreme, render them completely uninterpretable. In particular, MR exams of inherently poor signal, such as T2-weighted images or surface-coil images, suffer demonstrably. Many techniques have been attempted to minimize and to limit motion caused by the patient during these studies. While tape and velcro straps can restrict head motion, in some cases its application does not prove beneficial; moreover, a small patient may not provide the correct leverage for a velcro strap. Respiratory motion may be transferred to the head and spine as a consequence of the patient's interacting with the contour of the table. Attempts to completely restrict and secure the patient with pads or even vacuum cushions create an environment that increases the patient's anxiety and produces a higher risk that the exam will be terminated as a consequence of claustrophobia.

We report here our favorable results with a soft cervical spine collar. These collars have several advantages: they come in different sizes for different-size patients; they are readily applied with a velcro

fastener; they do not add to the "enclosed" feeling the magnet bore produces; they moderate and dampen any head motion; and they are useful for head exams as well as for cervical spine exams.

For cervical spine exams the collar is positioned so that the velcro strap fastener is placed between the surface coil and the patient to minimize distance between the surface coil and the anatomy of interest (Fig. 1). Image artifacts from swallowing and jaw movement, as well as from respiration and gross head turning, are reduced with the use of the soft collar. Other methods of patient immobilization have not met with as much success.

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MR in Spinal Tuberculous Abscess

MR imaging is a valuable tool for demonstrating various pathologic conditions. It is now in widespread use and, especially with spinal lesions, has shown distinct advantages over CT scanning [1, 2]. In this instance, a 23-year-old man presented with minimal neurologic signs (weakness of left opponens pollicis, hypothenar wasting, and bilaterally upgoing plantar responses) and unexplained weight loss, over a 3-month period. Initial diagnosis, after routine plain films,



Fig. 1.—Soft cervical spine collars provide an inexpensive and quick way to immobilize patients for MR exams of the cervical spine and head in a manner that achieves a large degree of patient compliance.

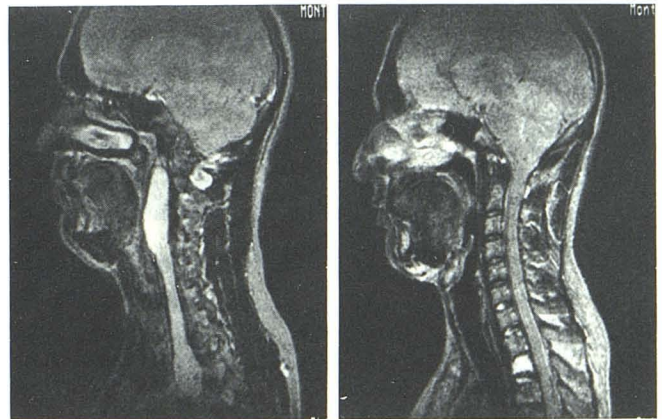


Fig. 1.—MR imaging with SE 1200/50 showing high-intensity prevertebral lesion extending from upper thoracic to nasopharynx.

Fig. 2.—MR imaging 5 months after aspiration in SE 1200/50 demonstrating high-intensity signal from T2 vertebral body and no prevertebral abscess.