FIGURE

approach angle of approximately 90° , bone was encountered. The needle was therefore withdrawn a few millimetres and the angle altered to approximately 70° . The epidural space was then easily identified, using loss of resistance to air, at a distance of 5 cm from skin. The force required to advance the needle through the ligaments was felt, however, to be more than is usually encountered. An attempt made to pass a catheter through the Tuohy needle proved to be impossible even though air and saline could be freely injected. The needle was therefore removed and, on examination, the tip was seen to be bent (Figure). The epidural space was easily identified at a second attempt, using a new Tuohy needle, and an identical approach to the first. This time the catheter passed easily. The patient received good analgesia and delivered uneventfully six hours later.

It is evident that the failure of the catheter to pass through the Tuohy needle was due to the bent tip. This is a problem which has not been previously reported. During the initial preparation, and equipment check prior to use, the catheter passed easily through the needle. At that point the tip was not deformed. It is likely, therefore, that the tip became deformed during the encounter with bone or on passage through the ligaments. Excessive force was not used at any time when compared with past experience. The cause of the deformity may have been due to unusually tough ligaments, or an abnormally weak needle or a combination of the two. Since the distal lumen was only partially obstructed, air and saline were easy to inject, but the path for the catheter was inadequate. Occasionally, difficulty to pass the catheter has been due to partial obstruction of the Tuohy needle tip by a flap of ligamentum flavum. Here is another problem to be borne in mind lest the unwary anaesthetist causes a dural tap by advancing the needle further.

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Postoperative analgesia in myasthenia gravis

To the Editor:

The management of postoperative pain may be an important problem in myasthenic patients who have undergone thymectomy with a median sternotomy incision. The choices of analgesic agent and route of administration are important because postoperative pain may compromise pulmonary function which is already impaired by myasthenia. Hypersensitivity to narcotics may induce respiratory depression. Ferreti *et al.*¹ have reported good results with high thoracic (C_7T_{1-3}) epidural combinations of bupivacaine and morphine in three patients. The paucity of such cases and the technical difficulties presented by thoracic epidural analgesia suggest that this technique has not gained wide acceptance.

We report here a 24-year-old female myasthenic who experienced excellent postoperative analgesia following the administration of $1 \text{ mg} \cdot \text{kg}^{-1}$ demerol in 0.9 per cent saline without bupivacaine, injected into the lumbar epidural space at the L_{3-4} interspace. The average duration of effect of each dose was 12 hours. Respiratory depression, pruritus and nausea did not occur. An extensive literature review has failed to reveal any reports of lumbar epidural narcotic administration for post-sternotomy pain in myasthenia gravis patients. Although this is but a single case and therefore could be considered an anecdotal report, the advantages of avoiding local anaesthetic agents and the potentially difficult and dangerous technique of thoracic epidural anaesthesia suggest that this may merit further investigation.

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REFERENCE

- 1 Ferreti F, Crestan IS, Rodriguez NJ, Tosi C, Martinoli S. Can one use high thoracic epidural analgesia in post operative intensive care of the myasthenia patient following trans sternal thymectomy? *Schweiz Med Wochenschr* 1987 117: 438-41.