The authors describe a technique by which a plug of fat is used to repair small rents in the spinal dura mater.

**Keywords** dura mater • technique

Small rents in the spinal dura mater along the anterior and lateral walls, especially at the point of origin of the nerve roots, if unrepaired, may lead to disabling pseudomeningocele, with or without nerve root entrapment.

The dura is often fragile at these points and hence repair from the outside is always difficult and sometimes impossible. Moreover, it is difficult to make grafts applied from the outside watertight.

The purpose of this paper is to describe a technique which we have tested in the dog and have now applied in several instances in man. It consists of bringing a plug of fat into the dural rent from the inside. We find it to be both an effective and relatively easy method of repair. Fat has been chosen as the graft material on the basis of animal experimentation which we will report elsewhere.

**Technique**

The dura is opened at an accessible medial point, and a plug of fat that has been anchored by a string is pulled through the new opening from the inside (Fig. 1). If the opening to be repaired is no more than 2 to 3 mm in length, the fat plug will become anchored in the surrounding ring without additional support. It is further supported by the inside

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**Fig. 1.** Drawing illustrating method of guiding a piece of fat onto the dural defect from the inside with a string.
FIG. 2. Photomicrograph of fat plaque in an experimental study on a dog, 5 days after grafting. The arrows indicate the edge of the dura mater. H & E, X 100.

thrust of the spinal fluid pressure. If the length of the opening is larger than 2 to 3 mm, it is advisable to support the graft with one or two anchoring sutures. The opening made in the dura in order to insert the graft is then closed in a routine manner.

In the dog, the fat plug has proved to be a watertight substance which is very quickly invaded by connective tissue from the dura (Fig. 2).

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