

80. THE EPIDURAL FIBRIN SHEAT FOR REPLACEMENT OF A NEW STIMULATION LEAD.

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Aim of the investigation: Sometimes patients with S.C.S. require lead revision because of lead break. We describe a new technique for percutaneous lead replacement.

Methods: If paresthesias are lost because of technical lead failure, a replacement of a new electrode is required. Earlier we repunctured the epidural space after removal of the broken electrode. By inserting the lead through the Tuohy needle, we sometimes failed steering the electrode at the initial position because of obstructions in the epidural space as fibrin deposits surrounding the earlier placed electrode. So, before withdrawal of the broken electrode, we dissect the interspinal ligament, guided by the electrode. By this, we can visualize the electrode penetrating the interspinal ligament entering the epidural space. After withdrawing the old electrode and maintaining the opening in vision, we can reinsert the new electrode through the hole. By smooth pushing the new electrode is introduced in the epidural space and follows the earlier formed fibrin sheat or scar tissue surrounding the former electrode. The epidural fibrin sheat is visualized by contrast dye (Iotrolanum 300; Schering AG) injected through an epidural catheter (Perifix 18 gauge Braun Melsungen AG) which also could be inserted into the fibrin sheat. Finally, the electrode is replaced in the initial position, surrounded by contrast dye. Identical stimulation parameters and pole combinations can be used as with the first electrode. As demonstrated in this case the sheat is completely surrounding the electrode. The sheat is closed at its terminal end so that advancing a newer electrode at a higher level gets impossible.

Results: By this method we replaced 12 electrodes in 12 patients. In only 2 patients we lost the insertion opening and had to repuncture the epidural space with consequently more difficulties to obtain adequate stimulation paresthesias.

Conclusions: In case of stimulation lead break we reinsert all our electrodes without repuncturing the epidural space. Reinsertion of the new electrode through an existing fibrine sheat seems easy as in no patients paresthesias were noticed by introduction of a new electrode into the sheat