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# ON THE TECHNIC OF LUMBAR PUNCTURE AND ANAESTHESIA IN SURGICAL INTERVENTIONS ON RUPTURED DISCS

*By*

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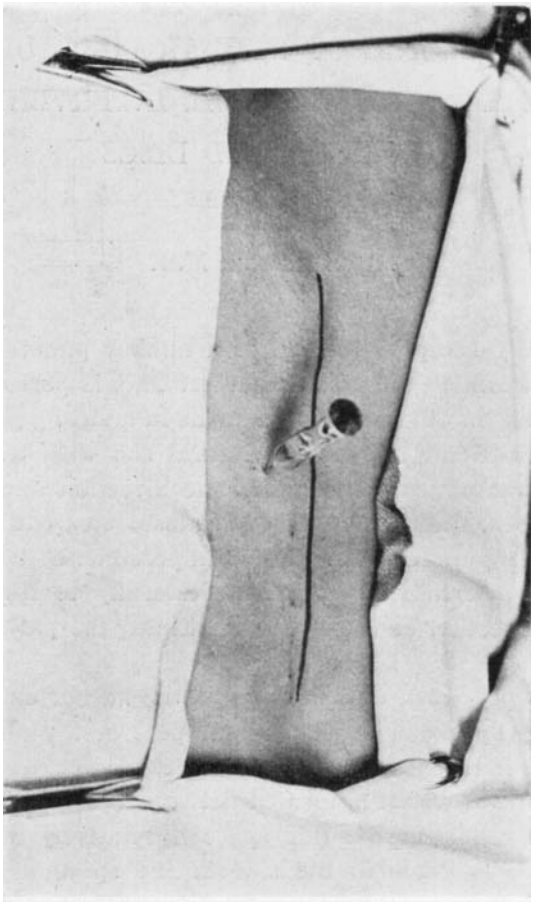
The generally accepted technic of a lumbar puncture is to insert the needle between the spinous processes. This is performed with the patient either on his side or bent forwards in a sitting position. It may sometimes be difficult to reach the dural sac with the needle; this is due to the anatomical conditions. The direction and shape of the spinous processes, the occurrence of scolioses etc., can contribute towards making a puncture difficult or impossible. Sometimes in such situations, the insertion of the needle laterally to the spinous processes in the direction of their base facilitates the path of the needle to the dural sac.

During autopsy work on spinal cords the author came to the conclusion that an approach to the lumbar part of the dural sac would be made easier if the needle was inserted through that portion of the ligamentum flavum which is located between the vertebral arches.

Within the lumbar spine this space is relatively large as a rule. If the puncture is made to the side of the spinous processes considerably more manoeuvring space for the lumbar needle is obtained and then only two possibilities exist, i.e. one may either encounter the arch or the elastic flavum. If the needle comes into contact with the arch it is easy to alter the direction so that the flavum is reached without withdrawing the needle. The dural sac extends along both sides of the spinous process towards the medial edge of the articular facets and the risk of going laterally around the sac is therefore slight. Moreover the advantage of this technic is that it is very easy to puncture the dura even though the patient is lying in a prone position, especially if the lumbar spine is in a slight kyphotic position. It is also possible to reach various interspaces from the same thrust of the needle.

The author has employed this technic for two years without complications. On making a puncture from the kyphotic prone position, the top end of the operation table is first raised. By this the outflow of fluid through the needle is increased.



The clinical diagnosis, in combination with the myelogram with abrodil, now gives greater certainty in determining the level in herniated intervertebral discs; owing to this the author considers himself justified in employing lumbar anaesthesia before the beginning of the operation and at the same time as the local anaesthesia. Earlier our technic was to induce local anaesthesia first. Then, after the laminectomy and when the patient had indicated through pain reaction that the surgeon had reached the correct interspace, lumbar or general anaesthesia was induced. This technic seems

to the author to lead to unnecessary distress for the patient and in some measure to interfere with the operation. Thus the author employs local anaesthesia and induces lumbar anaesthesia, with the patient still in the prone position, before the operation is commenced. No drawbacks to this procedure have been noticed.


## SUMMARY

The author describes a technic of puncture in lumbar anaesthesia—a lateral puncture via the flavum ligament between the vertebral arches. In disc hernia operations, combined local and lumbar anaesthesia are employed and the lumbar anaesthesia is administered at the same time as the local. The local anaesthesia then serves more as a hemostatic.

## RESUME

L'auteur décrit une technique de ponction d'anesthésie lombaire, — ponction latérale, transligamentaire, entre les arcs. Dans les opérations du prolapsus discal, on pratique une anesthésie combinée locale et lombaire, l'anesthésie lombaire étant faite en même temps que l'anesthésie locale, cette dernière jouant plutôt le rôle d'hémostatique.

## ZUSAMMENFASSUNG

Der Verfasser beschreibt eine Punktionstechnik für die Lumbalanästhesie — eine laterale transligamentäre Punktion zwischen den Wirbelbögen. Bei Operationen von Diskusprolapsen gibt man kombinierte Lumbal- und Lokalbetäubung, wobei man die Lumbalanästhesie gleichzeitig mit der lokalen ausführt. Die lokale dient vor allem zur Hämosthase.