

## DIVISION OF THE SPINAL CORD BELOW THE MEDULLA

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Division of the spinal cord beneath the medulla is usually made experimentally from the dorsal side. We have worked out a method of dividing it from the ventral aspect.

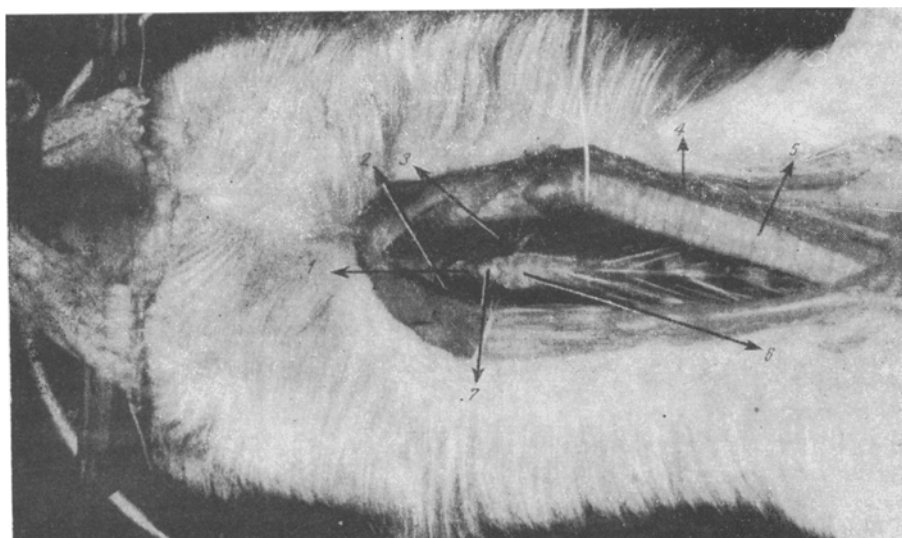
The experiments were performed on anesthetized cats. While respiration was artificially maintained the neck was opened and the esophagus (4) and trachea (5) were pushed to one side; the muscles were bluntly dissected [m. *langus capitis* (3) and m. *rectus capitis ventralis* (2)]. Beneath these muscles between the bone of the skull (1) and the atlas (6) there is a small space covered with fascia (*membrana atlanto-occipitalis ventralis* (7) (see the figure). At this level the spinal cord is transected and the aperture blocked with a cotton-wool plug. Immediately after the transection the arterial pressure falls to 55-65 mm (initial level 120 mm). After 1-1½ h the pressure rises somewhat, reaching 75-85 mm, and remaining at this level.

The advantage of transection of the spinal cord from the ventral side is that the arterial pressure falls only by 35-45 mm, whereas when transsection is made from the dorsal side it falls by 60-80 mm.

The operation may be performed without appreciable blood loss, and the technique is very simple. When an analysis is to be made of the mechanism of the action of drugs it is sometimes necessary, in addition to sectioning the spinal cord to introduce into the cerebrospinal fluid substances which alter the functional condition of the spinal cord (anesthesia, stimulation etc). The most convenient site for the injection of the substances is the opening we have just described.

### SUMMARY

An alternative to the established method of transection of the cord beneath the medulla from the dorsal side is suggested; a division is made from the ventral side between the occipital bone and the atlas where there is a small space covered with fascia.



The advantage consists in the simplicity of the technique; the operation produces no marked hemorrhage and the fall in blood pressure does not exceed 30-40 mm/Hg. Also, when necessary, substances to be tested may easily be introduced through the aperture made in this way.