

A GUIDE FOR USE IN X-RAYING THE LUMBAR COLUMN IN THE LUMBO-INGUINAL PROJECTION¹

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X-Ray films of the lumbar spine in the lumbo-inguinal projection (Kovacs, 1949) often provide valuable information about lateral herniations of the nucleus pulposus.

The patient is placed in the semi-prone position with the pelvis rotated to form an angle of 60° with the surface of the table. The X-Ray beam should be centred on a point two fingersbreadths medial to the posterior superior iliac spine, the tube being angled towards the feet to form an angle of 75° with a line passing through the three lower lumbar spinous processes. In this way, the intervertebral foramina on the side nearest the film are projected clear of the articular processes and the pelvic bones. By this method it may be possible to visualise a herniated disc or an osteophyte which has occurred owing to a calcification in a disruption of the periosteum caused by the herniation (Fig. 1) (Kovacs 1949, Kröker 1951).

We have used this projection for some time, but as the positioning was difficult and wasted time a guide was designed which much simplifies the procedure and improves the radiographs.

The guide (Fig. 2)² is made of a strip of plastic about 4 mm. thick and 6 cm. wide, bent to form a rightangled triangle, the other angles of which are 30° and 60° . The hypotenuse is prolonged past the 30° angle. At the mid-point of this side, an intersecting line is marked, from which point the edges of the plastic are tapered inwards towards the shortest side to make an angle of 165° . The other side is narrowed in a similar manner and a spirit level is fixed along the shortest side.

¹ The article was submitted to the Editor's in May 1953.

² The instrument is made in the Hospital-Workshop and can be obtained by applying to Department II, Orthopædic Hospital, Copenhagen.



Fig. 1.

Formation of osteophytes in the fifth lumbar intervertebral foramen demonstrated in the lumboinguinal projection.

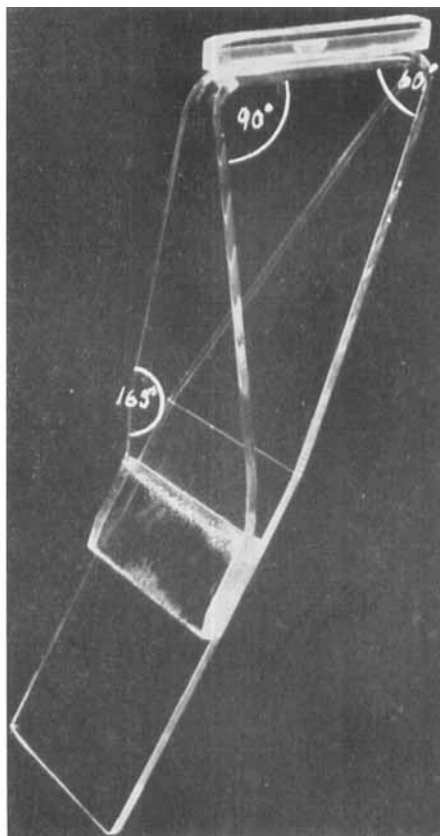


Fig. 2.

The guide.

The guide is used as follows:

The patient is placed in a lateral lying position. A line is drawn through the three lower lumbar spinous processes. The long side of the guide, with the spirit level uppermost, is placed on the patient's back, the intersecting line coinciding with the interspinous line. The pelvis is then rotated forwards until the bubble of the spirit level is in a central position. A line is then drawn on the patient's skin along the distal margin of the tapering edge of the guide and the instrument is removed. A point two fingersbreadths medial to the upper posterior superior iliac spine is marked, and the tube is centred on this point with the beam parallel to the line previously drawn on the skin. The alignment is considerably facilitated by a light-centring device incorporated with the diaphragm of the X-ray tube.

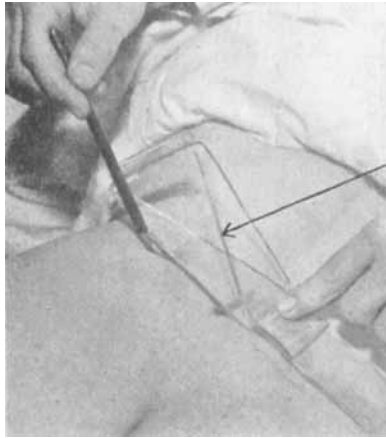


Fig. 3.
Method of applying the guide
to the patient.

This report is published to simplify the use of this lumbo-inguinal projection which, in our opinion, is a valuable supplement to clinical examination and standard X-Ray films in cases of herniated discs in the lower spine. Moreover, such films may acquire significance in compensation cases, as the demonstration of osteophytes immediately after injury to the back indicates a lesion of some standing.

S U M M A R Y

The author describes a perspex guide which simplifies the lumbo-inguinal projection of the lower lumbar vertebrae.

R E S U M E

L'auteur décrit un guide perspex qui simplifie la prospection lumbo-inguinale de la dernière vertèbre lombaire.

Z U S A M M E N F A S S U N G

Der Verfasser beschreibt ein Perspex-Führungsinstrument welches die lumbo-inguinal Projektion der unteren Lendenwirbel vereinfacht.

R E F E R E N C E S

- Kovacs, Akos:* Herniated discs and Vertebral Ligaments on Native Roentgenograms. *Acta radiol.* 32: 287, 1949.
- Kroker, P.:* Über die Röntgenuntersuchung beim lumbalen Bandscheibenvorfall mit Hilfe der lumboinguinalen Einstellung von Kovacs. *Fortschr. a.d.G.d. Röntgenstrahl.* 74: 512, 1951.