

## NOTE DE TECHNIQUE — TECHNICAL NOTE

### A SIMPLE RADIOGRAPHIC VIEW TO DEMONSTRATE GLENOHUMERAL DISLOCATION

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**The authors report a simple radiographic view which can be used under all circumstances to demonstrate a posterior or anterior glenohumeral dislocation.**

**Keywords :** glenohumeral dislocation ; shoulder dislocation.

**Mots-clés :** luxation scapulo-humérale ; luxation de l'épaule.

#### SAMENVATTING

*M. A. C. KADIC, W. R. OBERMANN, A. M. J. BURGERS en P. M. ROZING. Een eenvoudige röntgenopname voor het aantonen van een schouderluxatie.*

Posterieure glenohumerale luxaties worden nogal eens gemist. De 45° cranio-caudale opname van het schoudergewricht is een eenvoudige techniek om een goed interpreteerbare röntgenopname te vervaardigen om een posterieure of anterieure schouderluxatie in alle omstandigheden te kunnen aantonen.

#### RÉSUMÉ

*M. A. C. KADIC, W. R. OBERMANN, A. M. J. BURGERS et P. M. ROZING. Technique radiologique simple pour le diagnostic des luxations de l'épaule.*

La luxation scapulo-humérale postérieure est parfois méconnue. Une radiographie prise avec une inclinaison cranio-caudale de 45° permet, en toutes circonstances, de visualiser une luxation postérieure ou antérieure de l'épaule.

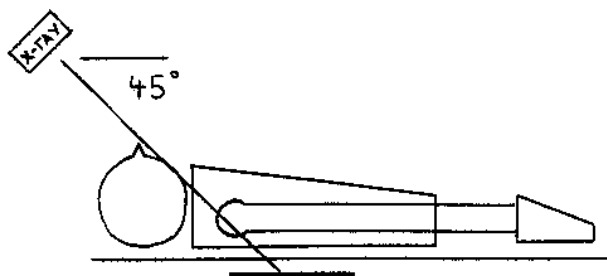
Posterior dislocation of the glenohumeral joint is often missed (2), not only clinically but also radiographically.

There are a number of X-ray views to demonstrate glenohumeral dislocation, of which the axillary, the transthoracic and the transscapular view are best known (4). However, an axillary view is not always possible in acute dislocation because abduction cannot be achieved by the patient, whereas the transthoracic view is difficult to interpret because of image overlap. The transscapular view on the other hand is a good alternative, but a Hill-Sachs defect cannot be seen. A computed axial tomographic scan clearly demonstrates the dislocation (4), but is not always available, and it is an expensive method to diagnose a dislocation. Therefore, in our hospital we use the 45° cranio-caudal view (6), which is easy to perform and can in all cases demonstrate anterior or posterior dislocation. Garth *et al.* (1) have already described an apical oblique view of the shoulder, and three other studies (3, 5, 7) demonstrated its usefulness in acute trauma. We have simplified the projection to a 45° craniocaudal view in which the X-ray beam is directed in a sagittal plane to the shoulder and arm. The patient may be sitting or standing, but after administration of a sedative for repositioning, we prefer the supine position, with the

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**Fig. 1.** — Position of the patient ; supine with the arm next to the trunk and with the palm of the hand on the table. The X-ray beam makes an angle of 45° with the table and is in a sagittal plane with the shoulder and arm.

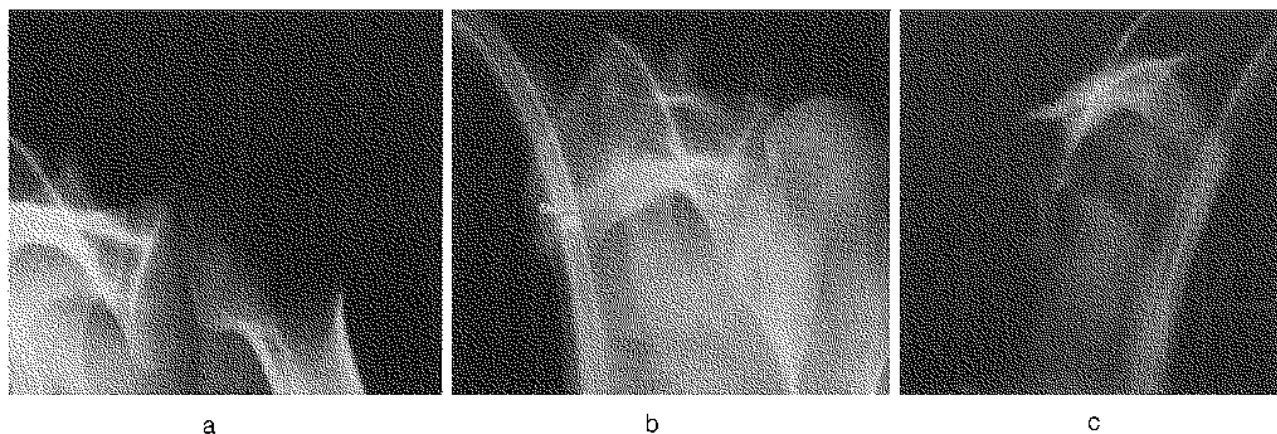
arm next to the trunk and the palm of the hand on the table or on the chest (fig. 1).

The 45° craniocaudal view is easy to interpret (fig. 2). In the posterior glenohumeral dislocation,

the humeral head is cranial to the glenoid, whereas in the anterior dislocation, the head is caudal to the glenoid (fig. 2). In a prospective study, the view proved to be very sensitive in detecting glenoid rim fractures and Hill-Sachs lesions (6). The equivalent of the Hill-Sachs defect in a posterior dislocation is always clearly seen.

We recommend the 45° craniocaudal projection along with the transscapular and axillary view as an accurate view to detect an anterior or posterior shoulder dislocation. Moreover, it is a simple projection for the technician to perform and painless for the patient in acute trauma.

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**Fig. 2.** — 45° craniocaudal roentgenographs of 3 different patients ; A. Posterior dislocation with the humeral head cranial to the glenoid ; B. Normal position of the humeral head ; C. Anterior dislocation with the humeral head caudal to the glenoid. In the 3 cases, a Hill-Sachs defect is clearly visible.

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