

P# 1

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Paper: Radiological positioning

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Date:

—————|||*# —————|||*# —————|||*#
Radiological finding and pathologies.

Case - 1:

* Hand-lateral:

Position of patient and image receptor:

i → * The hand will be rotated 90°
from the antero posterior.

(P.T.O)

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→★ The palm and image receptor is perpendicular while the finger extended and thumb adducted and supported parallel to the image receptor.

→★ The radial and ulnar styloid processes are superimposed.

Centering and direction of X-rays,
Over the head of second meta-
-carpal centered the vertical
Central rays.

Image Characteristics:-

Image should include
finger base, soft tissue and
(P.T.O.)

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radial and ulnar styloid process,
⇒ The head of the metacarpal
should be superimposed.

Additional Consideration:

→ The ~~head~~ hand and wrist
have many accessory ossicles
which may trap the unwary
into a false diagnosis of
pathology

→ The conspicuity of fractures
of the basis of the metacarpals
is reduced by over
rotation and under exposure.

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Case-2::

Clavical - Postero - Anterior::

* Position of patient and image receptor

* → The patient sit or stand facing image receptor

* → The middle of the clavicle will be to the center of image receptor

* → The patient head should be slightly rotate to close the clavicle to the image receptor.

Centering of X-rays::

The horizontal central rays
(P.T.O)

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is directed to the center of the clavicle with the beam collimated to the clavicle.

Image Characteristics:

- # entire length of clavicle should be included
- # The lateral end of clavicle will be demonstrated clear of the thoracic cage
- # Clavicle should be foreshortening
- # The exposure should demonstrate both lateral and medial end of clavicle.

Case - 3 ::

Femur - Lateral ::

* Position of patient and Image Receptor ::

* → from the antero-posterior position the patient rotates on the affected side

* → Knee is slightly flexed

* → The pelvis is rotated backward to separate the thighs

* → limb is adjusted to vertically superimpose the femoral

Condyles

* → Pads are used to support the
(P.T.O)

opposite limbs.

* → The image receptor is positioned in the bucky tray under the lateral aspect of the thigh.

* → The image receptor is positioned directly under the limbs against the lateral aspect of the thighs.

Direction and Centering of X-rays:

Center the middle image receptor with the vertical central rays parallel to the imaginary lines joining the femoral Condyle (P.T.O)

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Image characteristics:

→ The image should show the knee up to the proximal third of the femur

Additional Consideration:

→ The separate of the proximal region may be needed if the entire length of femur is required to be seen

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Case - 48°

Hip - Frog leg lateral

Position of patient and image Receptor:

→ The patient lies supine

(P.T.O)

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on the x-rays table with
the anterior posterior superior
iliac supine equidistance
from the table top to
avoid rotation of the pelvis.

* → The median sagittal is
perpendicular to the table

* → The hips and knees flexed
the limbs rotates laterally
at 60°

Direction and centering of x-rays:
Central the midline at the
level of the femoral pulse
with the central ray perpend-
(P.T.O)

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- far to the image receptor

Image Characteristics:

upper third of femora & iliac should be included.

having proper gonads protection and presence would obscure essential anatomy.

Additional Considerations:

* → often requested in the conjunction with antero-posterior hips in children when perthes diseases or SUFE is suspected

* → if 60° is not achievable then makes such angle that does not disrupt symmetry.