

IS THE LATERAL PROJECTION SUPERIOR TO ANTERO-POSTERIOR FOR VIDEOURODYNAMICS IN CHILDREN?

Hypothesis / aims of study

Our department has adopted the lateral projection for videourodynamics (VUD) in response to guidance from the International Continence Society (ICS)(1,2). However the recommendation is based on sparse evidence.

The aim of this study is to ascertain the frequency of pathology identified on lateral projection that may be missed on antero-posterior (AP) projection and may subsequently affect management.

Study design, materials and methods

We performed a retrospective analysis of VUD's performed between June 2015 and January 2017.

Patients from newborn to 16 years who had undergone VUD's were included. Urodynamic studies with no imaging were excluded.

VUD's were performed in line with International Children's Continence Society Guidelines (2015)(3). Fluoroscopic imaging was performed with the patient in a seated position using a C-arm, which could be rotated in a single plane.

Patients were divided into 2 groups: AP and lateral. Imaging was interrogated for voiding images of the urethra, anterior or posterior pathologies and vesico-ureteric reflux (VUR)

Results

Ninety urodynamic studies (48 male) met the inclusion criteria. Fifty-seven studies were in the lateral group.

In the lateral group 17/58 (29%) studies revealed pathology that may be missed on AP projection (5 vaginal reflux, 4 posterior urethral dilatation, 3 anteriorly directed posterior urethra, 1 anterior diverticulum, 1 syringocoele, 1 anterior bladder neck, 1 utricle, 1 urethral stricture). In 8/58 (14%) VUR was identified however laterality could not be confirmed.

Unilateral VUR was identified in 10/33 (30%) in the AP group. In 3/33 (9%) adequate views of the urethra were not obtained

Twenty-five (27%) patents were diagnosed with VUR. Three (12%) were subsequently treated with a STING procedure.

Interpretation of results

The lateral projection during VUD's demonstrates relevant pathology, which may not be identified on AP projection in a third of studies

Laterality of VUR cannot be reliably assessed on lateral projection. However only 12% require treatment therefore its clinical relevance is uncertain.

Concluding message

The lateral projection is superior for videourodynamics in children as it identifies clinically relevant pathology that would be missed on AP projection. A combination of AP and lateral is ideal

References

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Disclosures

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