

Oral Presentation

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Ultrasound augmented urodynamic assessment – implications for areas with limited resources

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Background

Urodynamic assessment forms the basis of urological management in patients with neuropathic bladder. Even with the availability of full video-urodynamic equipment assessment of bladder capacity at differing intra-vesical pressures can be difficult in the presence of severe vesico-ureteric reflux. This can make decisions about whether bladder augmentation surgery is necessary difficult.

Materials and Methods

We have combined real time assessment of bladder volume using portable Sonosite™ ultrasound scanning with video urodynamics to assess true bladder volume and the volume being stored in the upper tracts during urodynamic assessment. The success of this technique allowed the development of a reliable method for urodynamic assessment in countries with limited resources using just a feeding tube to catheterise the patient, a bag of saline, two intravenous giving sets, a measuring device (80 cm plastic rule) and the Sonosite™.

Results

The technique of functional bladder assessment will be demonstrated, together with its practical application in both the UK and also in paediatric wards in Khartoum, Sudan

Conclusion

Assessment of bladder volume at specific pressures is the basis of urodynamic assessment. This technique allows that assessment to take place in patients where bladder volume can not be predicted from the infused volume. It also allows full bladder assessment in an environment where neither formal urodynamic equipment nor X ray screening equipment is available.