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QUALITY CONTROL IN URODYNAMIC. AN AUDIT OF 100 FEMALE URODYNAMIC TRACES. A UK DISTRICT GENERAL HOSPITAL EXPERIENCE.

Hypothesis / aims of study

Quality control is a procedure intended to ensure that a product or performed service adheres to a defined set of criteria or meets the requirement of the client. This practice is well established in the industrial sector, however, it is not so commonly used in the medical sector. As management depends on correct diagnosis, quality control in medicine is vital.

There have been several studies that showed that many of the Urodynamic traces are of poor quality and lack basic quality control. Moreover, different terminology has been used, making it difficult to compare outcomes which sometimes leads to misinterpretation of results from different studies.

The Standardization Committee of the International Continence Society took the initiative and introduced a standardization of terminology in lower urinary tract function as well as the Good Urodynamic Practice Report. This has made it easier to compare results from different studies and to use the data as a gold standard for auditing purpose. There have been several studies about the quality control in Urodynamic traces. Most of these studies came from tertial referring specialised units, which might have a different outcome than a Urodynamic unit in a District General Hospital. The aim of our audit is to investigate the quality of Urodynamic traces in our unit, to compare our Urodynamic practice with the gold standards described by the ICS and other published data and to identify aspects of our practice that need improvement.

Study design, materials and methods

Female Urodynamic tests undertaken between November 2006 and October 2007 were identified. 100 traces were randomly selected for the audit. The Urodynamic traces were retrospectivly reviewed. The result was analysed and compared with gold standards described by the ICS and other published data.

Results

The age of the patient ranged between 24 and 77.In all cases there was a clear indication for the urodynamic. The most common indication was mixed urinary incontinence (49%). Stress urinary incontinence was the main indication in 32% of cases. Urge urinary incontinence and voiding dysfunction were the indication in 12% and 6% respectively. Testing for occult incontinence in cases with genital prolapse prior to surgery was the indication in 4% of cases. Baseline detrusor pressure was 0-10 cmH_2O in 90%, and –5 to + 10 in 97% of cases. The standing baseline intravesical and abdominal pressure were 30-50 cmH_2O in 76% and 53% of cases respectively.Cough signal was recorded before filling in 55 cases and during filling in all cases. It was recorded before voiding in 89 cases and in none of the cases it was recorded after voiding. The intravesical pressure line fell out in 15 cases during voiding. One trace was considered to be of poor quality and was not repeated without adequate explanation.

Interpretation of results

The results show the overall performance to be good. The result was also comparable to that obtained from other units. Improvement is still needed. Recording cough test before and during filling needs to be emphasised. Although voiding difficulty was present in a minority of our patients, care during the voiding phase of the test needs to improve, in particular maintaining the intravesical pressure line in-situ and recording cough after voiding.

Concluding message

This audit has shown that generally our traces meet the quality standards in many parameters. It has increased the awareness of our staff of good Urodynamic practice and has encouraged them to improve their practice. We are planning to reaudit our practice and extend the audit trust-wide.

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**Clinical audit**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**