315

Housami F[1], Al-Hayek S[1], Belal M[1], Agur W[1], Abrams P[1]
1. Bristol Urological Institute

RELIABILITY OF CLINICAL JUDGEMENT IN PREDICTING URODYNAMICS RESULTS

Hypothesis / aims of study

The aim of this study is to explore the reliability of clinical judgement in predicting the results of urodynamic investigations. The clinical judgement has to be based on accurate and detailed patient's history.

Study design, materials and methods

Records of standard urodynamic (UDS) tests performed between 1993 and 2003 were reviewed. This included male and female patients over the age of 16 years.

The clinical diagnosis documented by the physician after taking a detailed history form the patient and before commencing urodynamic tests was compared to the actual results obtained after performing these investigations. Those with incomplete data entry (10%) were excluded from the analysis.

The history taken from the patient was based on a detailed questionnaire which has not changed over the study period and this has also included free text to allow for unusual presenting symptoms.

Results

Over the 10 year study period a total of 7987 urodynamic records with complete data entry were reviewed. As each patient could have more than one diagnosis we compared each diagnosis independently (this is also the reason for the higher number in total urodynamic diagnoses of 9253 as compared to the actual number of records). Diagnosis categories were: Stress Incontinence (SI), Detrusor Overactivity (DO), Bladder Outflow Obstruction (BOO), Detrusor Underactivity (DUA) or Normal tests. Results are detailed in Table 1.

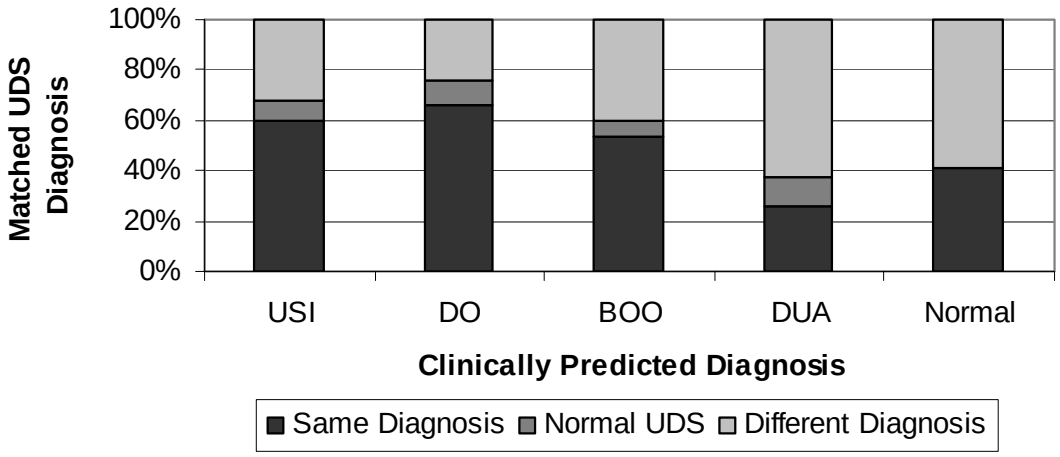
UDS Results		**Clinical Prediction (%)**			
		Same Diagnosis	Normal	Different Diagnosis	Unable to decide
SI	3541	3104 (88)	129 (3)	206 (6)	102 (3)
DO	3890	2814 (72)	153 (4)	751 (19)	172 (5)
BOO	564	355 (63)	15 (3)	136 (24)	58 (10)
DUA	284	75 (27)	21 (7)	153 (54)	35 (12)
Normal	974	204 (21)	-	743 (76)	27 (3)
Total	9253	6552 (71)	318 (3)	1989 (22)	394 (4)

Table 1: Clinical prediction vs UDS diagnosis

Correct prediction of urodynamics diagnosis ranged from 21 to 88%. The prediction was best in stress incontinence 88% (3104/3541) and detrusor overactivity 72% (2814/3890). Overall prediction was correct in 71% (6552/9253).

Looking at the data from a different angle (graph 1), we can see the likelihood of a correct clinical judgement. Clinical diagnosis accuracy ranged from 26% in detrusor underactivity to 66% in detrusor overactivity (see graph 1). The physician has expected only a small proportion (6%) of the tested patients to have normal results; of those 59% had a pathological urodynamic diagnosis and 41% had a normal urodynamic test.

Graph 1: Accuracy of Clinical Judgement



Interpretation of results

A previous study by Katz et al (1983) has shown that urodynamics did not give a clinically useful diagnosis in 20% of patients. This is in line with our normal findings (table 1).

It seems that urodynamics results were predicted accurately in 71% of cases. Only 3% of patients who had urodynamics were incorrectly expected to have a normal test. Prediction was more accurate in stress incontinence and detrusor overactivity; this is probably due to the clear symptoms for these two diagnosis categories. On the other hand predicting detrusor underactivity is less accurate due to the limited clinically interpretable symptoms.

Some may argue that it is difficult to convince patients to have an invasive test for a marginal increase in getting the diagnosis right. Others may find it justified to use invasive urodynamic tests in complicated cases or before considering surgical treatment.

Different factors could affect the accuracy of clinical judgement. The physician's level of experience, patient's embarrassment to admit to some symptoms especially incontinence and the complexity of the presenting symptoms all might affect how good can clinical judgement be.

Although a posted questionnaire might reduce the inconsistency in the experience level and allow patients to express their symptoms freely, interview based questionnaires have the advantage of asking specific questions and making sure that the patient understands the questions. It seems that a combination of these two forms of questionnaire might be the best in sensitive conditions such as incontinence.

Concluding message

At least 71% of urodynamic diagnoses are predicted accurately by the urodynamicist before performing the test. Spending time with patient and taking a good history would lead to a clinical judgement that is correct in 60% of the cases and misses pathology in only 3%.
Urodynamics is an invasive test thus it should be clinically justified and fully discussed with the patient.

FUNDING: NONE
DISCLOSURES: NONE
HUMAN SUBJECTS: This study did not need ethical approval because Retrospective study of records, no interaction with patients but followed the Declaration of Helsinki Informed consent was not obtained from the patients.