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Title: CURRENT TRENDS ON ALPP STUDIES: RESULTS OF AN INTERNATIONAL SURVEY

Aims of study.

Since its introduction into the urodynamic armamentarium, Abdominal Leak Point Pressure (ALPP) has been used with ever more increasing frequency for the urodynamic evaluation of urinary stress incontinence (USI), for the diagnosis of intrinsic sphincteric deficiency (ISD). Controversy still surrounds its ability to reliably perform these tasks, since many experts deny such a role for ALPP. One problem inherent to ALPP is the variability in testing procedures; in fact, several scientific papers have demonstrated that changing some testing conditions may significantly affect results. Our aim was to learn how many physicians specialised in USI evaluation routinely perform ALPP measurements, and how the procedures differ from physician to physician. For this purpose, we circulated a detailed questionnaire among physicians with a special interest in this field worldwide, and analysed the results.

Methods.

A 10-item questionnaire regarding the diagnostic approach prior to surgical correction of USI was mailed to members of the International Continence Society and experts of the Incontinence Knowledge Center of the VercomNet Healthcare web-site. The questions regarded the respondents' type of practice; their criteria for performing an urodynamic evaluation prior to surgical correction of USI and pelvic organ prolapse without USI; the types of urethral function studies performed and specific modalities employed in carrying out ALPP studies (patient's position; use of bladder catheter and size; bladder volume; type of abdominal pressure increase; means of leak visualisation, pressure measured for ALPP determination and pressure cut-off point considered indicative of definite ISD.

Results.

103 completed questionnaires from 27 countries were available for analysis. 62% of the respondents were urologists, while 38% were gynaecologists/urogynaecologists. The vast majority of respondents performed urodynamics testing prior to an anti-incontinence surgical procedure (85% always, 15% in selected cases), and prior to a genital prolapse correction (44% always, 42% sometimes). ALPP was performed always by 61% of the sample, in selected cases by 19%, and never by 20%. Urologists were more prone to use ALPP than gynaecologists (see fig. 1-3). Static UPP was generally less performed compared to ALPP studies: 48% of physicians used it always, 15% sometimes, and 30% never; dynamic UPP was even less common, as 37 % of the respondents stated that they never used it. The methodology used in ALPP studies by different respondents varied considerably. Patient's position was lithotomic in 24% of the cases, supine in 21%, and sitting in 43%, while 17% of the respondents indicated two of these options. The transurethral catheter was left in situ in 76% of the cases, and its size was rather inconsistent: <6Fr in 10%, 6-8Fr in 65 %, 9-10Fr in 19% and 6% > 10Fr. Bladder volume as well varied considerably: about 250 cc in 53%, near maximum capacity in 20%, both in 12%, maximum capacity only if there was no leak at 250 cc in 11%, and other modalities in 4%. The increase in abdominal pressure was obtained through a Valsalva manoeuvre in 56% of the cases, coughing in 24%, and both in 20%. The main means of leak visualisation was an

"eyeball" evaluation, with fewer people using fluoroscopy, and even fewer using uroflowmetry. The cut-off pressure considered indicative of definite ISD varied between 15 and 110 cmH20, with 60% of the respondents indicating values around 60 cmH2O, while 12% of them did not have a definite opinion.

Conclusions.

There was considerable agreement regarding the use of urodynamic testing prior to surgical anti-incontinence procedures, as well as on the use of ALPP studies, which were utilized by 80% of the respondents. This trend was much higher among urologists than among gynaecologists (90% vs. 65%).Testing procedure modalities varied widely in all aspects, even those significantly affecting results. The results enmerging from this survey unequivocally confirm the great variability in the way ALPP testing is performed and interpreted. As this test is widely used in clinical practice, in clinical trials and in scientific publications, a standardisation of methodology is urgently required.

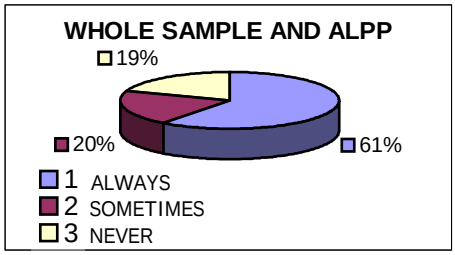

Fig. 1. ALPP use among the entire sample

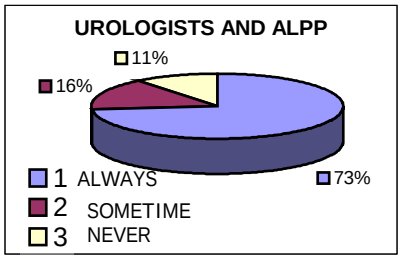

Fig.2. ALPP use among urologists

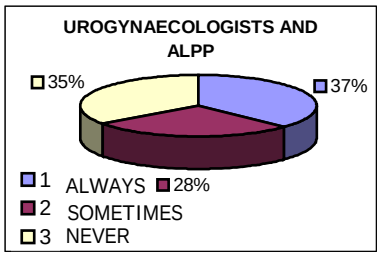

Fig.3. ALPP use among urogynaecologists