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SES-NUD: A STANDARDISED SYSTEM FOR THE EVALUATION OF NEUROGENIC URINARY TRACT DYSFUNCTION

Aims of Study

Despite the formulation of several anatomical and functional classifications, and the recent introduction of standardised terminology (1), a schematic, operative instrument that accurately assesses the clinical status of patients suffering from neurogenic voiding dysfunction is still lacking. Such a tool would allow clinicians to describe all the characteristics of functional urinary tract impairment, as well as its impact on quality of life, in a comprehensive, yet synthetic way. Further, this instrument would permit a more rapid recognition of (pejorative) changes in patient conditions, besides facilitating scientific communication on the matter.
The aim of this report is to introduce a new standardised evaluation system for neurogenic urinary tract dysfunction (SES-NUD). The system was initially created for spinal cord injury (SCI) patients, and has recently been adopted by two Italian scientific Societies: the Italian Urodynamics Society (SIUD), and the Italian Medical Society of Paraplegia (SoMIPar).

Methods

In 1998, 14 SIUD and SoMIPar members formed a multidisciplinary committee to draft the present standardisation document. Three sub-committees were nominated to treat different aspects of the problem, i.e. functional impairment, disability, and handicap and quality of life issues. The sub-committees met frequently (both separately and jointly) over a two-year period. The document was finalised and adopted following a consensus conference held in Turin in June 2000, and a suitable circulation period among society members. The system was applied in 10 Spinal Cord Injury Centres in Italy over the course of the development period.

Results

All relevant qualitative and quantitative aspects of functional urinary tract (UT) impairment, UT-specific disability, handicap, and quality of life issues are reported on a four-by-three grid system (Figure 1).
Functional lower urinary tract impairment (as revealed in detailed videourodynamic investigation), is specified in the first two lines of the grid. in the first line, information garnered via filling cystometry is displayed, including bladder sensitivity and compliance, detrusor activity, bladder neck status, and status of the external urethral sphincter during bladder filling. Corresponding voiding phase parameters are described in the second line of the grid, along with residual urine. The functional and morphological states of the upper urinary tract, including vesico-ureteral reflux grading, are reported in the first sector of the third line of the grid, based on cystographic, ultrasonic and bio-humoral (creatinine clearance) findings. The second sector of the third line relates to the presence and severity of autonomic dysreflexia signs and symptoms during cystometry. The third sector of the third line concerns the specific disability, whereas the last sector reflects specific handicap and quality of life (QoL) issues. The disability specific to the neurogenic urinary dysfunction involves urinary incontinence and retention. Urinary incontinence is measured using the following parameters: a) incontinence episodes frequency (IEF); b) the need for appliances (NFA); and c) time requirements or dependency on care-givers. Similarly, urinary retention is evaluated according to: a) the extent of bladder emptying; b) the need for devices (intermittent or indwelling catheterisation, electrical stimulation); and c) time requirements, or dependency on care-givers. Handicap and QoL are measured by means of two condition-specific questionnaires. The handicap item is scored from 0 (no handicap) to 57 (greatest impact on patient's social life). The QoL is scored from 0 (best QoL) to 9 (worst QoL).

C S	D	Bn	Us
D	Bn	Us	Ru
R / Uut / Cc	AD	I R	H Q

Table 1. The grid used for the SES-NUD. Abbreviations: C= bladder Compliance; S= bladder Sensitivity; D= Detrusor activity; Bn= Bladder neck; Us= external Urethral sphincter; Ru= Residual urine; R= vesico-ureteral Reflux; Uut= Upper urinary tract; Cc= Creatinine clearance; AD= Autonomic Dysreflexia; I= urinary Incontinence; R= urinary Retention; H= Handicap; Q= Quality of life.

Conclusions

The SES-NUD is a new instrument providing detailed, schematic information on the clinical status of patients with neurogenic voiding dysfunction. It assesses functional impairment of the lower and upper urinary tract, including the presence and severity of autonomic dysreflexia, specific disability issues (i.e. urinary incontinence and retention), and issues specific to handicap and quality of life. The widespread use of this system will improve patient management and scientific communication.

References

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