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LONG-TERM URODYNAMIC FOLLOW-UP IN SPINAL CORD INJURY PATIENTS TREATED WITH LASER SPHINCTEROTOMY

Aims of Study

External sphincterotomy in spinal cord injured (SCI) males is a safe and simple treatment that is commonly employed in patients with detrusor hyperreflexia and external sphincter dyssynergia. We evaluated the long-term results of external sphincterotomy using urodynamic endpoints.

Methods

A total of 94 SCI patients with detrusor hyperreflexia (DH) and dyssynergia (DESD) underwent laser sphincterotomy between 1992 and 1997. 68 patients (mean age 27 years) with yearly follow urodynamics studies of at least 5 years were included in this study. Mean clinical and urodynamics follow-up is 7.8 years. There were no significant differences in age, level of SCI, duration of injury (mean 3.4 years prior to procedure) or preoperative urodynamics parameters between the two groups.

Results

Voiding pressure remained <50 cm H_2O in 84% (57/68) and 81% (22/27) of patients at 5 and 10 years respectively. Post-void residual (PVR) begins to significantly increase approximately 5 years following sphincterotomy without an associated increase in voiding pressure. Recurrent sphincteric obstruction was seen in 10% (7/48) patients. At 5-10 years, 21-33% of patients have clinical or urodynamics finding suggestive of significantly impaired detrusor contractility and 18% (12/68) were on some type of catheterization program.

Urodynamic Parameters:

F/U Years	Preop	**1**	**2**	**3**	**4**	**5**	**10**
PVR (cc)	155	53	45	54	67	98	174
Voiding pressure (cm H2O)	86	39	37	27	35	32	36

Conclusions

Laser external sphincterotomy is a safe and effective treatment in the management of DESD in spinal cord injured men. Urodynamically, voiding pressure remains stable following laser external sphincterotomy. However, approximately 5 years following sphincterotomy, PVR is seen to steadily increase. This increase in PVR indicates a trend toward impaired detrusor contractility that may account for the majority of poor long-term outcomes. Further studies are needed to define the natural history of bladder dysfunction in SCI to determine whether this finding occurs in untreated patients who reflexively void.

References

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