

PTQTM Implants in the treatment of faecal soiling

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Introduction

Patients with faecal soiling often have a problem with leakage after defaecation but are continent to flatus and liquids for most of the time. Anorectal manometry values are usually within the normal range. Structural damage may result in an anatomical irregularity of the anal canal known as a keyhole defect. PTQTM Implants may be used to correct the keyhole defect by restoring the symmetry of the anal canal. The aim of this prospective study was to evaluate the effectiveness of such implants in the treatment of faecal soiling after anal surgery.

Patients and methods

Patients with faecal soiling and a keyhole defect demonstrated by endoanal ultrasonography but otherwise normal anorectal function were treated with PTQTM Implants (Uroplasty BV; Geleen, The Netherlands). Pudendal nerve terminal motor latency, rectal sensitivity tests and anal manometry were performed to exclude true (passive) incontinence. Patients with true passive incontinence to liquids and those psychologically unsuited to an intervention under local anaesthesia were not included.

Injections were performed on an outpatient basis under local anaesthesia with the patient in the supine position. Needle tips were positioned in the submucosal internal sphincter interface under the guidance of a palpating finger and a maximum of 7.5 ml was injected¹. Adverse effects were assessed after 2 weeks. If physical examination and ultrasonography revealed that bulking was insufficient, further implantation was carried out 4 weeks after the initial procedure, using a maximum of 7.5 ml.

Patients completed a 2-week bowel habit diary and a quality of life questionnaire, and rated their satisfaction

on a visual analogue scale before the procedure, and at 3 and 12 months after treatment. Quality of life score was assessed with a EuroQol-5D instrument that evaluates the existence of problems in five health domains: mobility, self-care, usual activities, pain/discomfort and anxiety/depression in relation to faecal incontinence. Comparisons were made between the outcome obtained before treatment and at 3 months and 12 months follow-up using the Wilcoxon test. Statistical significance was assigned at the $P < 0.05$ level.

Results

Twenty-four consecutive patients (16 men) with a median age of 55 (range 33–79) years were included in the study. A mean volume of 6.7 (range 2.5–18.0) ml was injected in one or more sessions to bulk the keyhole defect. There were no adverse effects apart from one transient infection. Eight patients received a second PTQTM Implant and two patients required a third procedure. The mean patient satisfaction score improved from 2.8 to 6.6 ($P = 0.001$). The mean daily soiling frequency was 2.0 (range 1–5) before treatment, and 1.1 (range 0–3) ($P = 0.001$) and 1.5 (range 0–3) ($P = 0.001$) after 3 and 12 months respectively. The mean Vaizey incontinence score was 4.2 (range 0–8) before treatment and 2.5 (range 0–6) ($P < 0.001$) and 2.1 (range 0–6) ($P < 0.001$) after 3 and 12 months respectively. The mean resting and squeeze anal canal pressures did not change after treatment. Faecal soiling resolved completely in five patients and a partial response was obtained in 11 patients.

Discussion

The function and interaction of the anal cushions and the internal sphincter in faecal continence is still not clear. Vascular filling of the anal cushions contributes about 15–20 per cent of the resting anal canal pressure and the anal cushions act as a 'compliant and comfortable plug' at the anal margin². Gross examination of excised PTQTM Implants reveals discrete implants surrounded by host tissue augmenting (bulking) the original implantation site³.

In this study PTQTM Implants were used to correct the asymmetry of the anal canal by specifically bulking the site of the keyhole defect. In other studies, patients with soiling alone have been shown to benefit from three circumferential injections at the haemorrhoidal cushions, which also possibly restored the symmetry of the anal canal. In the present series the Vaizey incontinence score and soiling complaints decreased significantly in

Table 1 Patient outcome

	Baseline	3 months	12 months
Mean(s.d.) maximum resting pressure (mmHg)	63(20)	62(23)	—
Mean(s.d.) maximum squeeze pressure (mmHg)	155(59)	195(100)	—
Mean (range) patient satisfaction score	2.8 (1–5)	6.6* (1–10)	—
Mean (range) daily soiling frequency	2.0 (1–5)	1.1 (0–3)*	1.5 (0–3)*
No. of pads used daily	1.9 (1–5)	0.7† (0–2)	0.5† (0–2)
Mean (range) Vaizey incontinence score	4.2 (0–8)	2.5 (0–6)†	2.1 (0–6)†
Mean quality of life score			
Constipation	86(80–100)	86(58–100)	85(77–93)
Faecal incontinence	81(53–100)	84(58–99)	83(58–99)
Psychosocial functioning	79(68–80)	82(80–95)‡	81(80–100)

* $P = 0.001$, † $P < 0.001$, ‡ $P < 0.050$ versus baseline.

16 patients. Responses to the quality of life questionnaire, developed especially for faecal incontinence rather than faecal soiling, did not show a significant improvement except in psychosocial functioning after this procedure. In this and other studies^{4,5} the PTQTM Implants appeared to be safe and effective. Half of the patients had undergone low fistula surgery. At this time it is not possible to speculate on the risk of fistula recurrence at long-term follow-up.

The present results indicate that use of PTQTM Implants to bulk keyhole defects in the anal canal seems effective in the short term. Another study¹ has shown continued clinical improvement for up to 6 months after injection as a result of fibrosis. It will be interesting to see whether the patient group in the present study will eventually need further injections.

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35 years ago

Polyposis of the stomach and small intestine in association with familial polyposis coli

Although polyposis of the upper GI tract was first described in the 19th century, this was held not to be a feature of FAP as late as 1969. A simple observation discredits 'expert opinion'.

Three cases of familial polyposis coli with adenomatous polyps of the upper gastro-intestinal tract are reported. This association has not previously been described in Britain, probably because no special attempt has been made to detect polyps in these situations. A careful study of known cases of polyposis coli is required to establish the frequency and fate of associated gastric or small intestinal polyps, with particular reference to the risk of malignant degeneration and the possibility of prophylactic surgical measures.

Hoffmann DC, Goligher JC. Polyposis of the stomach and small intestine in association with familial polyposis coli. *Br J Surg* 1971; **44**: 126–128 (DOI: 10.1002/bjs.1800580212)

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