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Title: Periurethral Injection of Silicon Microimplantate (Macroplastique) for The Correction of Genuine Spinchter Incontinence

Introduction:

First line treatment for genuine stress urinary incontinence (GSI) is conservative (pelvic floor exercise, functional electrical stimulation). In cases refractory to conservative measures classical incontinence surgery, e.g. colposuspension and similar procedures, is performed. However, this type of surgery requires an adequate sphincter function to be successful. Patients who do not respond often suffer from an insufficiency of the intramural sphincter. In these cases, other kinds of reconstructive surgery must be considered, such as pubovaginal sling procedures, implantation of an artificial sphincter or peri/intraurethral injection of some expansion substance. Here, we present our experience of periurethral injection of silicone microimplants (Macroplastique).

Method:

Eight men and 22 women with urodynamically stable detrusor, and validated GSI on a standardized quantification test, participated in the study. Under direct endoscopic control Macroplastique (3.8-10 ml) was injected periurethrally, circumferentially distributed, 1-2 centimetres distal to the bladder neck. Follow-up was performed by a questionnaire and a new standardized quantification test.

Results:

More than half of the 22 patients with follow-up in excess of two years reported a considerable amelioration and their subjective impressions were also validated by the postoperative standardized quantification test. Of the eight patients with a follow-up time of less than two years, the figures were about the same. In this series, one third of all the patients received more than one treatment. No side effects were reported except for mild dysuria for practically all the patients, in all cases transient. A few patients also reported a short initial sensation of incomplete bladder emptying.

Conclusion:

Macroplastique injection treatment resulted in improvement in more than half of our patients and the improvement sustained for at least two years, in some cases requiring repeated injection, though. Considering the difficulty in treating sphincter insufficiency, particularly iatrogenic, the results in this study appear to justify the attempt of injection therapy. It may very well be performed as an out-patient procedure and, moreover, side effects are rare. If silicone microimplants are used there is no obstacle to proceed with artificial sphincter implantation, should the patient's symptoms remain unaffected by the injection procedure.