

COMPARISON BETWEEN MONOFILAMENT AND MULTIFILAMENT POLYPROPYLENE TAPES IN URINARY INCONTINENCE

Hypothesis / aims of study

We compare the efficiency and late complications between a polypropylene monofilament tape (TVT) and a polypropylene multifilament tape (IVS) in the surgical implant of sub-urethral tension-free tape for the treatment of stress urinary incontinence.

Study design, materials and methods

We performed a retrospective study of 313 female patients operated on for stress urinary incontinence by a single surgeon, in a single center.

The analyse was based on a questionnaire that was sent by mail to patients, at least one year after surgery. Statistical analysis assessed the results.

Results

The study included 313 female patients of which 256 (82%) responded to the questionnaire.

Between january 2000 and january 2001, 164 patients were fitted with a TVT.

Between february 2001 and april 2002, 149 patients were fitted with an IVS.

Patient satisfaction rate was 88.3% for the TVT tape and 76.5% for the IVS tape. This difference is statically significant ($p < 0.005$). De "novo" urge incontinence was more common (but not significantly) in the TVT group. However, the rates of dysuria, recurrences were more common in the IVS group, but the difference is not significant.

The rate of infection of tapes was higher in the IVS group (11/149) than in the TVT group (0/164) with a significant difference.

Interpretation of results

In our series, the multifilament tape (IVS) appears to have more infection rate and less satisfaction rate than the monofilament tape (TVT).

The infections with multifilament tapes could be explained by the "pore theory". Indeed, if the size of a pore is less than 10 μm , bacteria whose size is about 1 μm , can penetrate and colonize the mesh whereas immune cells which are larger, can not.

The improvement of the quality of life was higher with the TVT.

Patients complaining about de "novo" or persistent urge incontinence are less satisfied evne if they are cured from stress urinary incontinence..

Our study is the largest one conducted comparing efficiency and morbidity of two different polypropylene prosthetic materials in the treatment of stress urinary incontinence.

Concluding message

The type of tape appears to influence efficiency and the emergence of late complications. Our results point at the greater efficiency of the polypropylene monofilament tape with greater satisfaction and less complications.