Transurethral GAX Collagen for stress incontinence – a 10 year single centre experience

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Material and Methods

Objectives

Collagen injection is the only transurethral bulking procedure covered by our national public health system.

Material and Methods

Between January 2000 and December 2010, we performed 158 transurethral collagen injections in males with ISD after prostatic surgery (70 after TUR P, 88 after open prostatectomy). The examination protocol included basic urologic evaluation, urodynamic evaluation and imaging. We included only the patients in which leakage was observed during our evaluation. We used GAX collagen, injected under spinal anesthesia. The injection was performed at 3, 6 and 9 o’clock, until complete (122 cases) or partial obstruction (36 cases) of the urethral lumina was obtained. The patients were reevaluated 6 months or sooner, if the patient required leakage.

Results

The mean collagen volume used was 21 ml/patient (10 – 50ml). In 64.5% of the cases, we repeated the procedure (46 cases – one time, 52 cases – three or more times). After the first injection, 41% of the patients became dry and 29% had the same leakage. After the second injection, the rate of the dry patients grew to 58%. After 18 months, 31% of the patients are still dry. After 32 months, urinary continence is present in 29% of the patients and significant improvement is seen in 17% of the cases. The complications we encountered were: acute urinary retention (14%), overactive bladder (9%), UTI (4%), hematuria (2%), urethritis (1%).

Conclusions

GAX collagen proves efficient in about one third of cases, even if the procedure should be repeated after some time. In many cases, it is necessary to perform several procedures to obtain continence. Transurethral collagen injection is a reasonable therapeutic option for the patients with ISD after prostatic surgery, and may be used until more effective treatments become available.

January 2000 - December 2010
Stress Urinary Incontinence
6 months after prostatic surgery

158 patients
(ISD after prostatectomy)

60
60

59%
41%

FUT
Open prostatectomy

Evaluation

Injection technique

Injection technique

GAX collagen

Collagen injection at 3, 6 and 9 o’clock

Mean volume of collagen injected: 21 ml/patient (10-50ml)

Spinal anesthesia

Reevaluation after 6 months

RESULTS

CONCLUSIONS


Details of the device used for transurethral injection (on rigid cystoscope)

- Urodynamic evaluation is essential before performing any bulking procedure for stress urinary incontinence
- Transurethral collagen injection is a reasonable therapeutic option for this type of patients
- When other modern bulking agents will be available on a large scale, collagen will be the reference for comparison

- 43%
- 31%
- 34%
- 17%
- 54%
- 122 cases (64.5%)
- 52 cases needed reinjection

Dry Improvement No change

Urethrocystography 9 months after collagen injection in continent patient

After the first Injection

After the second Injection

102 cases (64.5%)

160 cases

Acute urinary retention - 14%
Overactive bladder - 9%
Urinary tract infection - 4%
Neutrosis - 2%
Urinetis - 4%

32 months follow-up

Details of the device used for transurethral injection (on rigid cystoscope)

- Evaluation
- Urologic evaluation
- Urodynamics
- Imaging
- Leakage was observed during urodynamics

102 cases (64.5%)

18 months

48 cases – one time, 52 cases – three or more times

122 cases

52 cases needed reinjection

Spinal anesthesia

Urethrocystography 9 months after collagen injection in continent patient

122 CASES

102 CASES

Spinal anesthesia

Urethrocystography Large passage

122 CASES

122 CASES

Details of the device used for transurethral injection (on rigid cystoscope)

- Second injection
- Complete obstruction of the urethral lumina after contralateral injection
- Large passage on the posterior aspect of the urethra
- Urethrocystography - Large passage in incontinent patient
- Sectorial injection technique
- Complete obstruction of the urethral lumina after contralateral injection
- Urethrocystography - Large passage between the bladder neck and the urethra in continent patient

- Material and Methods
- GAX collagen
- Injection technique
- RESULTS
- CONCLUSIONS

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ABSTRACT

Objectives. Collagen injection is the only transurethral bulking procedure covered by our health system. We did a retrospective analysis of the results of transurethral collagen injections in patients with intrinsic sphincteric deficiency (ISD) after prostatic surgery (TUR P or open prostatectomy). Material and Methods. Between January 2000 and December 2010, we performed 158 transurethral collagen injections in males with ISD after prostatic surgery (70 after TUR P, 88 after open prostatectomy). The examination protocol included basic urologic evaluation, urodynamic evaluation and imaging. We included only the patients in which leakage was observed during our evaluation. We used GAX collagen, injected under spinal anesthesia. The injection was performed at 3, 6 and 9 o’clock, until complete (122 cases) or partial obstruction (36 cases) of the urethral lumina was obtained. The patients were reevaluated 6 months or sooner, if the patient required leakage.

Results. The mean collagen volume used was 21 ml/patient (10 – 50ml). In 64.5% of the cases, we repeated the procedure (46 cases – one time, 52 cases – three or more times). After the first injection, 41% of the patients became dry and 29% had the same leakage. After the second injection, the rate of the dry patients grew to 58%. After 18 months, 31% of the patients are still dry. After 32 months, urinary continence is present in 29% of the patients and significant improvement is seen in 17% of the cases. The complications we encountered were: acute urinary retention (14%), overactive bladder (9%), UTI (4%), hematuria (2%), urethritis (1%).

Conclusions. GAX collagen proves efficient in about one third of cases, even if the procedure should be repeated after some time. In many cases, it is necessary to perform several procedures to obtain continence. Transurethral collagen injection is a reasonable therapeutic option for the patients with ISD after prostatic surgery, and may be used until more effective treatments become available.