

A CLINICAL EVALUATION OF MINIARC PRECISE PERFORMED FOR THE TREATMENT OF STRESS URINARY INCONTINENCE; WHY THEY ARE SO EFFECTIVE?

Hypothesis / aims of study

MiniArc is a new single-incision, minimally invasive, midurethral sling method for the treatment of stress urinary incontinence (SUI) in women. This study was designed to evaluate its efficacy for treatment of the SUI and to think about the various types of self fixating mechanisms anchoring the tapes with their successful outcomes.

Study design, materials and methods

A total of 32 women patients performed MiniArc Precise for treatment of SUI were enrolled in this study, who actually complained unacceptable SUI and inconvenience in daily life regardless of the results of preoperative studies of the SUI. All patients were 42 to 69 years of age (mean, 55.2±6.3) and prospectively investigated pad test, urodynamic study, operation time, estimated blood loss (EBL), pain scale (NRS, numeric rating scale, 0-10) after surgery, the length of urethral Foley catheter and hospital stay, BMI (body mass index), postoperative outcomes in terms of incontinence on coughing and life of quality by IIQ-7 questionnaire, and other factors on follow up over 6 months. MiniArc procedures performed under the general (29 patients), regional (2 patients), or local anesthesia (one patient) by one surgeon. The MiniArc sling was inserted through a single 1.5 cm mid-urethral vaginal incision along the periurethral plane to the obturator internus muscles. The follow up durations were 13.8±4.87 months (range, 6 to 25 months). The IIO-7 Questionnaires were obtained by the telephone and personal interview at outpatients clinic.

Results

The weight of 1-hour pad test was 50 gm (median) (range 0-370 gm). Operation times were 20.71±5.06 (range, 10-35 min.) and EBL were clinically negligible in amount, mean 27.34±21.02 (0-100 ml). The postoperative pain scores (NRS) were 2.75±0.84 (range, 1 to 5). Urethral Foley catheters were kept for 2 to 24 hours (mean 19.9±8.102). They were discharged on postoperative 1st to 4th day according to the amount of residual urine. Their BMIs were 26.2±6.54 (range, 20.2 to 55.2). The IIQ-7 mean scores decreased from 15.25±3.23 (range, 8-21) to 1.25±1.92 (range, 0-8) ($p=0.000$) at mean 14 months after operation (6-25 months). SUI cured in 28 patients of 32 patients (87.5%) without urine loss even on coughing and exercise. Among these 4 failed cases 3 showed improvement to IIQ-7 degree 1 (slightly) incontinence and one to degree 2 (moderately) incontinence on coughing and exercise, and two patients were combined with urgency incontinence. As a result the cure and the significant improvement less the moderate degree of stress incontinence achieved in 31 patients (96.9%).

There were no statistically significant difference between the BMI and other factors ($p>0.05$)

Interpretation of results

MiniArc Precise was an efficient choice for treatment of SUI and improved the quality of life.

This method caused relatively less pain after operation and at discharge. There was no clinically significant bleeding and hematoma. The operation times and hospital stays were relatively short.

Concluding message

The mini- and mid-urethral sling, MiniArc Precise is one of the efficient treatment of choice for treatment of SUI with less complications and inconveniences.

I think that the bleeding while operation might be resulted from making a wrong pathway to the internal obturator muscle, and the shape of the self fixating extremity of the tape may be the most important for successful surgery in terms of normal voiding without incontinence and retention, and this is needed to be discussed in details.

Disclosures

Funding: none **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics not Req'd:** this was standard treatment for stress urinary incontinence **Helsinki:** Yes **Informed Consent:** Yes