

KAPLAN-MEIER ANALYSIS OF TVT SURGERY: OBJECTIVE AND SUBJECTIVE ANALYSIS TWO YEARS

Aims of Study

TVT operation is effective to regain continence by supporting the pubourethral ligament that can be done with minimally surgical invasiveness under local anesthesia. Nilsson et al. [1] reported recently that this surgery was successful in 85% 5 years after surgery, although prospective randomized studies are necessary. Kondo et al. [2] reported that surgical results of the Stamey procedure were less favourable in those suffered from type III stress urinary incontinence (SUI) compared to those suffered from type I or II. We aimed to clarify surgical outcomes depending on subjective and objective assessments and depending on the urinary incontinence type.

Methods

Two hundred and three female patients with genuine SUI or mixed incontinence who had a TVT operation prospectively performed between April 1997 and October 1999 in 15 institution in Japan. Women were post-operatively asked to visit the clinic 3, 12, and 24 months to be evaluated by a doctor and to assess the outcomes by themselves. It is confirmed so far that one hundred sixty-one women visited the clinic 3 month later, 106 women 12 months later, and 68 women at 24-month follow-up. None of them had had failed surgery for SUI. These patients contributed to a formation of Kaplan-Meier analysis curves. The mean age of the patients was 57 (31 to 82), and a 60-min pad-test averaged 34.8 g/hr (0 to 498) prior to operation. Subjective success is consistent with complete continence or only slight leakage with strong physical exercises, while objective one is in accord with negative responses to stress test with a bladder capacity of >250ml. Overall success is the condition which satisfies both subjective and objective success. Statistical analysis was made by the Mann-Whitney test.

Results

Kaplan-Meier cumulative continence rates observed 2 years later were 93.6% for the subjective success and 87.7% for the objective success, respectively. Although the former is higher than the latter, there are not statistically different (Figure 1, $p=0.3944$). When SUI types were taken into consideration, an overall cure rate was only 67.9% for those with type III and 88.1% for those with type I + II (Figure2).

The difference is significant ($p<0.0001$), suggesting that TVT operation will result in better surgical outcomes in those with type I or II. The most frequent complication was bladder perforation in 24 patients (11.8%), followed by difficulty in urination in 10 patients (4.9%), de novo overactivity in 5 patients (2.5%) and an exposure of the tape in 2 (1.0%).

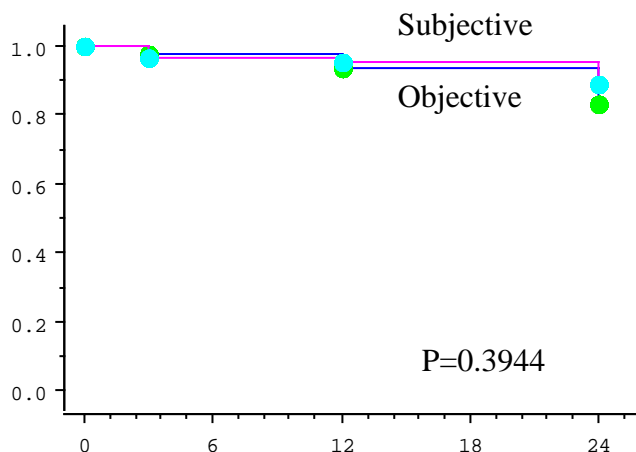


Figure 1: Disease free survival (subjective v.s. objective evaluation)

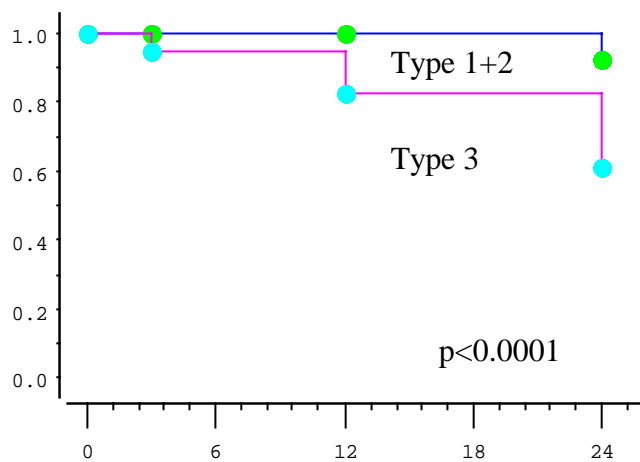


Figure 2: Disease-free survival (MacGuire classification)

Conclusions

Ulmsten and his co-workers reported surgical outcomes of his surgery as follows: 86% of complete cure and 11% of significant improvement 3 years later [3], and 85% of complete cure and 11% of significant improvement 5 years later [1]. Azam et al. [4] reported a rather optimistic outcomes of TVT surgery that was utilized for those with previous failed surgery, i.e., 81% of cure and 6% of significant improvement only 1 year later. Our success rate with TVT surgery was found comparable with other anti-incontinence procedures.

In conclusion, TVT operation is promising and recommended for all types of SUI when minimal surgical invasiveness and high cure rates are taken into consideration.

References:

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