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COST-EFFECTIVENESS OF THERAPEUTICAL MODALITIES FOR FEMALE URINARY INCONTINENCE IN TERMS OF QOL IMPROVEMENT

Aims of Study

Cost-effectiveness is one of the important parameters in evaluating usefulness of medical treatment. Effectiveness of treatment for urinary incontinence has usually been assessed based on physician's perception in terms of cure rates. However, since urinary incontinence is not a life-threatening but a QoL disorder, effectiveness should be assessed based on patient's perception, that is QoL. A Multicenter prospective study was performed to assess cost-effectiveness of treatment modalities for female urinary incontinence in terms of QoL improvement.

Methods

In 15 institutions in Japan, 145 female patients with urinary incontinence were enrolled to the study. Ages of the patients ranged from 34 to 86 years with mean of 62 years. The types of urinary incontinence diagnosed were stress incontinence in 88 patients (mean age:59 years), urge incontinence in 26 (mean age:69) and mixed incontinence in 31 (mean age:63). They were diagnosed and treated according to the Japanese Clinical Guideline for Female Urinary Incontinence. The therapeutical modalities comprised surgical treatment, physiotherapy (pelvic floor training or bladder training), physiotherapy combined with medication and pharmacotherapy. QoL was assessed using King's Health Questionnaire before and 3 months after treatment. Effectiveness of each therapeutical method was assessed from physician's perception in terms of improvement of incontinence (cured, improved, unchanged or worsened) and from patient's perception in terms of QoL improvement. In assessment of QoL improvement, not only the scores of each domain in KHQ, but also the total score as a sum of the score of each domain were obtained. The total direct cost for diagnosis and treatment was calculated and compared with therapeutical effectiveness. In the present paper, the medical cost was indicated as Euro converted from Japanese Yen.

Results

The therapeutical methods selected for stress urinary incontinence comprised surgical treatment in 35 patients, physiotherapy in 27, physiotherapy combined with medication in 16 and pharmacotherapy in 10. Surgical treatment consisted of tension-free vaginal tape (TVT) sling in 33, periurethral collagen injection in one and anterior corporraphy in one. Administered drugs were clenbuterol in 20 patients and imipramine in 6. Urge incontinence was treated with drugs in 21 patients, physiotherapy combined with medication in 4 and physiotherapy in one. The drugs administered for urge incontinence were propiverine in 14 patients, oxybutynine in 6 and others in 5. Mixed incontinence was treated with drugs in 15 patients, physiotherapy combined with medication in 7, physiotherapy in 5, surgery in 4. Drugs administered for mixed incontinence included propiverine in 11 patients, oxybutynine in 6, clenbuterol in 2 and others in 3. TVT was performed in 2 and collagen injection in 2. In whole patients, physician reported that incontinence was cured in 37%, improved in 37% and unchanged in 26%. All domains in KHQ improved after treatment, the KHQ sum score being significantly decreased from 314.9 (mean) to 140.4. The cure rates, the improvement of the KHQ sum score, the direct medical costs and the costs required to improve one point of the KHQ sum score (direct costs divided by improvement of the KHQ sum score) for each therapeutical modality are shown in Table.

	Cured (%)	Improved (%)	Improvement of KHQ sum socre (mean)	Total direct medical costs (Euro)	Cost(Euro) /improvement of KHQ sum score
surgery	85.4	9.1	352	1764	5.0
physiotherapy	12.5	37.5	60	216	3.6
Physiotherapy with medication	7.7	38.5	114	459	4.0
pharmacotherapy	10	60	100	434	4.3

The cure rate of surgery was extremely higher than that of other conservative therapy. The total direct costs for surgical treatment were 3.8 to 8.2 times as expensive as that for conservative therapy. However, difference of costs required to improve one point of the KHQ sum score among all therapeutical modalities reduced within 1.2 to 1.4 times.

Conclusions

Surgery for urinary incontinence is an expensive treatment. However, surgical treatment produces high cure rate of urinary incontinence and distinguished improvement in QoL. Surgical treatment for female stress urinary incontinence reveals good cost-effectiveness and fills an adequate role as a first-line therapy.