REVIEWS

Impact of Incontinence Surgery on Sexual Function: A Systematic Review and Meta-Analysis

Swati Jha, MD, MRCOG,* Manjunath Ammenbal, MRCOG,† and Mostafa Metwally, MD, MRCOG‡

*Department of Urogynaecology, Sheffield Teaching Hospitals NHS Foundation Trust, Jessop Wing, Tree Root Walk, UK;
†Obstetrics and Gynaecology, Sheffield Teaching Hospitals NHS Foundation Trust, Jessop Wing, Tree Root Walk, UK;
‡Reproductive Medicine, Sheffield Teaching Hospitals NHS Foundation Trust, Jessop Wing, Tree Root Walk, UK

DOI: 10.1111/j.1743-6109.2011.02366.x

ABSTRACT

Introduction. Urinary incontinence has an adverse impact on sexual function. The reports on sexual function following the treatment of urinary incontinence are confusing.
Aim. To investigate the impact of surgery for stress incontinence on coital incontinence and overall sexual function.
Methods. Cochrane Incontinence Group Specialized Register of Controlled Trials, The Cochrane Central Register of Controlled Trials, MEDLINE, and EMBASE were searched for trials of incontinence surgery assessing sexual function and coital incontinence before and after surgery. Observational studies and randomized controlled trials investigating the impact of surgical correction of stress urinary incontinence on sexual function were included. Surgical interventions included tension-free vaginal tape (TVT), Tension Free Vaginal Tape-Obturator (TVT-O), transobturator tape (TOT), Burch, and autologous fascial sling (AFS). Studies that included patients undergoing concurrent prolapse surgery were excluded from the analysis. Data extraction and analysis was performed independently by two authors. Coital incontinence was analyzed separately and odds ratios (ORs) with 95% confidence intervals (CI) calculated. The data were analyzed in Review Manager 5 software.
Main Outcome Measure. Changes in sexual function and coital incontinence following surgery for urinary incontinence.
Results. Twenty-one articles were identified, which assessed sexual function and/or coital incontinence following continence surgery in the absence of prolapse. Results suggest evidence for a significant reduction in coital incontinence post surgery (OR 0.11; 95% CI 0.07, 0.17).
Conclusions. Coital incontinence is significantly reduced following continence surgery. There were several methodological problems with the quality of the primary research particularly related to heterogeneity of studies, use of different outcome measures, and the absence of well-designed randomized controlled trials. **Jha S, Ammenbal M, and Metwally M. Impact of incontinence surgery on sexual function: A systematic review and meta-analysis. J Sex Med 2012;9:34–43.**

Key Words. Sexual Function; Coital Incontinence; TVT; TVT-O; Colposuspension; Autologous Fascial Sling; Change; Improvement; Deterioration; Urinary Incontinence

Introduction

It is now widely accepted that urinary incontinence has an adverse impact on sexual function resulting in coital incontinence [1–4] and a variety of other symptoms with a negative impact on all domains of sexual function [5,6]. In this population of women, the symptoms per se, along with fear of odor, embarrassment, shame, loss of self-esteem and fear of, or actual occurrence of, incontinence are contributory factors. Studies have found that women with urinary incontinence report less frequent sexual activity [5,7], and this may restrict sexual activity for fear of incontinence. Among the most common sexual complaints in women with urinary incontinence are low desire, vaginal

Details of ethics approval: NA.

dryness, and dyspareunia [8]. These are similar to the problems seen in women with sexual dysfunction in the absence of urinary incontinence.

The reports on response of sexual function following the treatment of urinary incontinence are confusing. Some studies suggest deterioration [9–12] of sexual function, some an improvement [3,13–16], whereas others are equivocal [17–20].

The aim of this review was to assess the impact of surgery for stress incontinence on coital incontinence and overall sexual function. Women undergoing surgery for stress incontinence may be bothered by the impact it has on different aspects of their life. Sexual function is an important aspect of well-being, and some women undergoing surgery for stress incontinence do so in the hope that it will improve their sexual function. These may be unrealistic expectations. The current evidence is confusing and does not guide clinicians on the advice they should be giving women prior to incontinence surgery to predict future outcome with regard to sexual function. This study will assist in counselling women about more realistic expectations of changes in sexual function following surgery. It will also provide information on the aspects of sexual function that is likely to be altered by surgery as well as those that will probably remain unchanged.

Methods

The methods followed the guidelines issued by the Meta-analysis of Observational Studies in Epidemiology (MOOSE) [21].

Inclusion and Exclusion Criteria

Sexually active women with stress incontinence, either in isolation or in combination with detrusor overactivity (mixed incontinence) proven on urodynamic studies, and undergoing surgery for their stress incontinence were included. Studies where sexual function was assessed were included. Patients acted as their own controls. Articles that included patients with concurrent prolapse were excluded from the review.

Search Strategy

A systematic computerized search was conducted on published literature from eight databases in May 2009. The databases searched (inclusive dates) were MEDLINE (1950–2009), EMBASE (1980–2009), Cochrane library (1991–2009), Science Citation Index (1900–2007), Social Science Citation Index (1900–2009), CINAHL (1982–2009), MEDLINE In-Process, and other non-indexed citations.

No date or language restrictions were used. The search strategy used combinations of search terms related to sexual function, interventions for incontinence, and outcomes for sexual function. Search terms used related to sexual function were "sexual function" and "coital incontinence". Terms relating to the intervention were tension free vaginal tape ("TVT"), "TVT-O," "colposuspension," and "autologous fascial sling." Terms related to outcome measures were "change," "improvement," and "deterioration." The following databases were searched: Cochrane Incontinence Group Specialized Register of Controlled Trials, The Cochrane Central Register of Controlled Trials, MEDLINE, and EMBASE for trials of incontinence surgery assessing sexual function and coital incontinence before and after surgery. The search was conducted by the ScHARR.

Assessment of Methodological Quality

Studies were predominantly cohort studies. Two randomized controlled trials (RCTs) were identified, which analyzed sexual function in different continence procedures. The RCTs, however, used change in stress urinary incontinence (SUI) as the primary outcome measure rather than sexual function, hence these studies were analyzed for the purposes of this systematic review based on the individual procedures performed and outcome with regard to sexual function. We carried out crude event rate analysis of the RCTs by treating each arm as a case series.

Interventions

The type of interventions included commonly performed procedures for urodynamic stress incontinence (i.e., TVT, transobturator tape [TOT], colposuspension, and autologous fascial sling) as these are approved as being evidence-based in their efficacy. Studies looking at procedures no longer in use and not proven to be beneficial were excluded (i.e., bulking agents and minitapes were not included in the analysis).

Outcomes

The studies varied significantly in the reporting of sexual function. Whereas some studies used a sexual function questionnaire, some reported on the change in overall status as a binary outcome (i.e., better, worse, or no change), and other studies reported on specific symptoms of sexual function. Questionnaires used included the Prolapse and Incontinence Sexual Function Questionnaire (PISQ 31 and 12), Female Sexual Function Index