

TAPE REJECTION - LOCAL PROCESS OR GENERAL REACTION OF THE ORGANISM.

Hypothesis / aims of study

Mesh rejection is an important problem associated with large and still increasing number of taping reconstructive surgeries for female urinary incontinence or pelvic organ prolapse. The most of studies underline the inflammatory or immunologic reaction of the vagina to polypropylene mesh. C-reactive protein is a member of the class of acute phase reactants as its levels rise dramatically during inflammatory processes occurring in the body. It is also believed to play an important role in innate immunity, as an early defense system against infections. Our study was aimed to reveal if the tape rejection is associated with increase in serum C-reactive protein level.

Study design, materials and methods

Prospective study was approved by local Ethical Committee and all patients signed the informed consent before the study procedures. Patients with previous concomitant inflammatory or immunologic diseases as well as with myocardial infarction or malignant neoplasms were excluded from the study. Only women with IVS multifilament tape (Tyco, Healthcare) used during reconstructive pelvic surgeries were included. Blood was collected in a serum-separating tube and CRP was analysed by ELISA method. Values lower than 10 mg/l were considered as a normal.

Results

Since August 2005 to December 2006 we observed 28 cases of tape rejection in our Department: 5 after posterior IVS operation, 14 after retropubic sling procedure - IVS 02 and 9 after transobturator suburethral tape – IVS 04. The mean time from the operation to rejection was $17,0 \pm 10,3$ month (Me 13 mths; min 7, max 50 mths). The mean age of women was $54,8 \pm 9,8$ yrs (Me 53,5; min 31, max 79 yrs). Six of them were before menopause and 22 minimum 2 years after last menstrual period. None of them used hormonal replacement therapy. Ten women were completely asymptomatic and tape erosion was discovered at control gynecological visits, two had fever (above 37 °C) and abscessi (the first in the abdomen - after retropubic IVS and the second in the labium majoris of the vulva after transobturator procedure). Four women had also pyogenic discharge from the skin or vagina but it comes out freely and their temperature was normal. Ten women complained of dyspareunia, vaginal bleeding and irritative voiding. We found C-reactive protein values as a normal (mean $3 \pm 2,9$ mg/l, Me 1,85 mg/l, range 0,1-7,0 mg/l) except two cases with formation of abscessi and a fever where it was markedly elevated (19,6 mg/l and 45,8 mg/l).

Interpretation of results

The incidence of tape erosion varies between studies from 0,6 % to 7,2%. The authors reports local immunologic reactions around the rejected tape or acute or chronic inflammation. Only abscessus formation causes the general reaction of the organism, otherwise the process is limited to local cellular response. In literature we found that material and filament composition of mesh is supposed to be important factor in determining this reaction.

Concluding message

The organism does not react generally on the tape rejection process if there is no abscessus formation in surrounding tissue.

FUNDING: NONE

DISCLOSURES: NONE

HUMAN SUBJECTS: This study was approved by the Ethical Committee in Medical University of Lublin, Poland and followed the Declaration of Helsinki Informed consent was obtained from the patients.