

VAGINAL MESH EXTRUSION RATES ARE ONLY SLIGHTLY INFLUENCED BY VAGINAL BACTERIAL COLONISATION

Hypothesis / aims of study

Implantation of transobturatoric meshes is frequently used in the surgical treatment of cystoceles. Wound healing problems with mesh extrusions are frequently observed. We determined bacterial colonisation of the vagina and analyzed the relation to mesh extrusions.

Study design, materials and methods

In our prospective multicenter study 200 patients with Cystoceles underwent surgical transobturatoric mesh implantation. The microbiological colonisation was analyzed before surgery, after 3 months and after 12 months. The amount of bacteria species were semi-quantitatively scored into no bacteria, few, numerous and plenteous. The pH-value of the vaginal fluid was determined with special litmus paper and a gynaecologic examination was performed.

No surgery was performed when acute vaginitis was observed. An antibiotic prophylaxis was given to all patients preoperatively with a 3rd Generation Cephalosporine and Metronidazole.

Statistical Analyses were performed with the Mann-Whitney-U Test and with Fishers-Exact Test.

Results

194 patients were evaluated either after three months and 186 after one year.

The extrusion rate at 3 months was 7.2% (14/194) and 5.9% at 12 months.

The pH-value of the vaginal fluid was 5.4 preoperatively, 5.1 at 3 months and 5.2 at 12 months. These values were strongly correlated to the observed amount of lactobacillus colonisation. The preoperative pH-values were not statistically different in patients with or without extrusions at 3 or 12 months follow up examination (5.0 and 5.3 at 3 months and 5.0 and 5.4 at 12 months, respectively).

A colonisation with physiologic vaginal bacteria was observed in 64% of patients preoperatively, in 68% at 3 months and in 60% at 12 months. Colonisation with physiologic bacteria was not correlated to extrusions at 3months, but we observed a statistically significant correlation between preoperative physiological colonisation and extrusion rates at 12 months. Patients without an extrusion had a physiological bacterial colonisation in 67.7% in contrast to 34.4% Patients with an extrusion ($p=0.046$).

A colonisation with pathogenic bacteria like streptococci, staphylococci or pseudomonas species was observed in 17% of patients preoperatively, in 19% at 3 months and in 19% at 12 months. Colonisation with pathogenic bacteria was not correlated to extrusion rates.

Interpretation of results

An unphysiologic bacterial colonisation of the vagina is frequently observed in patients with POP. A colonisation of the vagina with physiological bacteria may prevent mesh extrusions in patients with mesh augmented surgery for POP, but overall mesh extrusion rates were only slightly related to bacterial colonisation of the vagina.

Concluding message

Mesh extrusion rates were only slightly related to bacterial colonisation of the vagina.

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| Specify source of funding or grant | Universitätsklinik Freiburg |
| Is this a clinical trial? | Yes |
| Is this study registered in a public clinical trials registry? | Yes |
| Specify Name of Public Registry, Registration Number | German clinical trial register DRKS 00000305 |
| Is this a Randomised Controlled Trial (RCT)? | No |
| What were the subjects in the study? | HUMAN |
| Was this study approved by an ethics committee? | Yes |
| Specify Name of Ethics Committee | Universität Freiburg |
| Was the Declaration of Helsinki followed? | Yes |
| Was informed consent obtained from the patients? | Yes |