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DOES MONOFILAMENT POLYPROPYLENE MESH CONTRACT IN THE POSTERIOR PELVIC COMPARTMENT?

Hypothesis / aims of study

This prospective study aims to evaluate the changes in the surface area (cm^2) of monofilament polypropylene mesh by ultrasound examination at three time points which had been placed into the posterior vaginal compartment for the treatment of posterior pelvic floor defect.

Study design, materials and methods

This prospective study study has been carried out in the urogynecology division of Ataturk Research and Training Hospital between November 2009 - February 2011. We assessed 28 consecutive patients who had undergone mesh implantation for the correction of symptomatic posterior vaginal wall prolapse. During the surgery, the actual surface area was measured by multiplying the long edge with the short edge (initial area). 0n 3rd, 6th and 12th postoperative months, we performed translabial ultrasound examination to measure the surface area. The cases that we could not perform a uniform measurements were not included in the study.

The general lineer model repeated measures test has been used in the analysis of data. The test value for the comparison between the measurements was $p<0.001$. Adjustment for multiple comparisons was made by using Bonferroni test.

Results

There were 28 cases. The mean age of the study group was 45.3±7.9 years. The mean surface area of the implanted mesh was 29.8±5.5 cm^2 (min-max 19.4-40 cm^2). The measurement on 3rd postoperative months showed a statistically significant reduction in the area of mesh (29.8±5.5 vs. 17.7±5.8 cm^2, p=0.000). However, the measurements at 6th and 12th months also showed reductions in the surface area of the implanted mesh, but these results were not statistically significant (17.7±5.8 vs.12.2±4.5 cm^2, p=0.408; 12.2±4.5 cm^2 vs. 8.8±3.2 cm^2, p=0.082).

Interpretation of results

We found a substantial evidence of mesh contraction at the end of almost 1 year follow up of 28 women who underwent posterior mesh placement surgery in opposition to some studies (1). Besides, this prospective longitudinal study shed some light on a debatable issue (2,3) showing that the maximum mesh contraction happens during the first 3 months after surgery, the shrinkage continues to exist but the intensity declines by time.

Concluding message

Monofilament polypropylene meshes contract continuously by time and the maximum shrinkage happens in the first 3 months, postoperatively.

References

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Is this study registered in a public clinical trials registry?	**No**
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	**Comission on ethics of Ankara Ataturk Research and Training Hospital**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**