

ULTRASONOGRAPHIC SCAN EVALUATION OF SYNTHETIC MESH USED FOR VAGINAL CYSTOCELE REPAIR COMPARING FOUR ARMS TRANS OBTURATOR TECHNIQUES TO BILATERAL ANTERIOR SACROSPINOUS LIGAMENT AND ARCUS TENDINEUS SUSPENSION, AT 2 YEARS FOLLOW UP.

Hypothesis / aims of study

Pelvic organ prolapse (POP) surgery benefits of new synthetic mesh and new surgical kit to perform surgery. Tension free meshes were placed with four arms trans obturator (TO), and a more recent one with bilateral anterior sacro spinous ligament and arcus tendineus suspension (SE).

Ultrasonographic scan shows synthetic mesh used in vaginal cystocele repair. Pelvic position and evolution of the mesh can be followed up after surgery. Dislodgement and contraction are pointed to be a part of mesh complication repair, for prolapse recurrence. Surgical procedure, define multi parameters to localize the mesh.

The main objective is ultrasonographic evolution of synthetic mesh at 1 year follow up and its correlation with clinical outcome.

Study design, materials and methods

Between January and March 2010, we included prospectively 60 patients, 30 with trans obturator polypropylene mesh Ugytex™ (Sofradi, COVIDIEN) (TO), and 30 with Pinnacle™ (Boston Scientific) (SE) mesh for vaginal cystocele repair.

The mesh was measured pre operatively (PO). Ultrasonographic scan was performed 2D/3D, intra vaginal and trans perineal, 3 day (D3), 6 week (W6), one year (Y1) and at two years (Y2) follow up. 3D mesh reconstruction and intra vaginal – trans perineal scan permit a double checking of measurements. We evaluated mid-sagittal length of the mesh, anatomic place, distance to bladder neck and mesh area. We defined the “arc” of the mesh, distance between the two most opposite points of the mesh under vagina. Clinical examination with POP-Q was done at each follow up.

Results

All meshes were visualized. At D3 sagittal arcus is the same for both meshes: (TO): 40MM +/-68mm and (SE): 40mm +/-5mm. A decrease in the total length is noticed for (TO) [D3: 52 +/-9mm to W6: 40 +/-9mm to Y2: 35 +/-8mm] not observed for (SE) meshes [D3: 52 +/-10mm to W6: 45 +/-12mm to Y2: 38 +/-6mm] (Test Wilcoxon, p<.05, for each timing).

At 2 years postoperatively, the (TO) mesh correspond to 67% of the initial mesh measured by ultrasound at day 3 (Y2/D3) with an arcus measured at 31 mm (+ / - 10mm) versus 73% for the (SE) mesh with an arcus of 35 mm (+ / - 4mm) in average. (Test Wilcoxon, p<.05) There is a better place for the spreading of the (SE) meshes. The sagittal arcus at 6 weeks is a prognostic factor of its at 1 year because it no longer changes, (Y1/W6): (TO) 32 mm (+ / - 8mm) and (SE) 40mm (+ / - 9mm).

At last follow up, at rest, 28% (TO) meshes (8/28) are up to the bladder neck and none of the SE. We have four cases of recurrent cystocele of grade 2 for (TO) mesh placement and one for (SE) prostheses. In (TO) cases, recurrence is located in the lower part of the anterior vagina (between mesh and bladder neck) (bladder neck mesh distance 19mm + / -4 vs 4mm + / -4, P <.05). For (SE) prolapse recurrence, mesh prolapse with vagina.

Interpretation of results

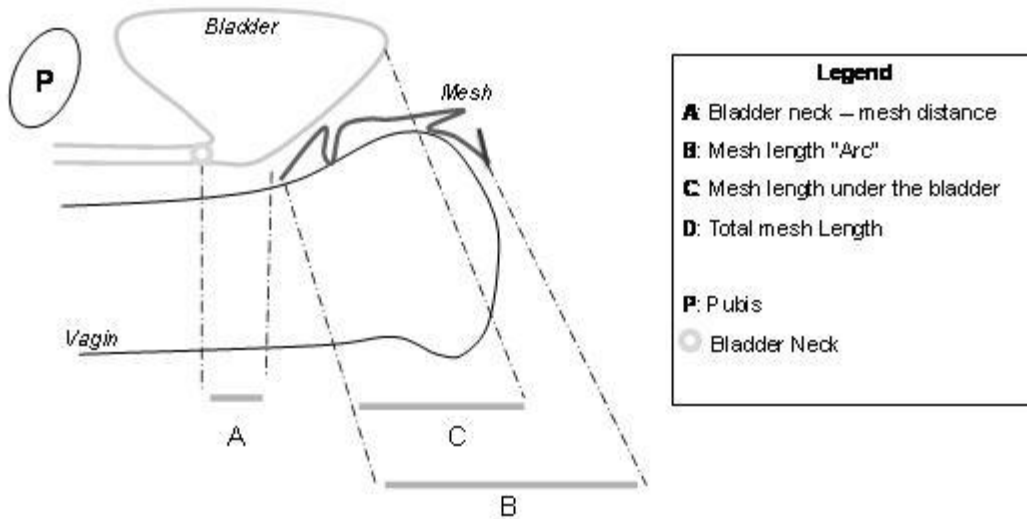
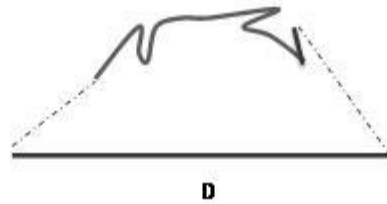
Ultrasonography allows a good follow up of the vaginal part of the mesh (size and folding).

Mesh contraction is similar to the literature, due to vaginal route and polypropylene.

Cystocele recurrences after (TO) procedure are localized in the lower part of the anterior vagina, which might be prevent by (SE) procedure.

Concluding message

The type of mesh tension free fixation seems to predefine its evolution (size) in time. Mesh shrinkage should due partly to its method of installation.



References

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Disclosures

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