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ULTRASONOGRAPHIC SCAN TIMING IN THE EVALUATION OF SYNTHETIC MESH IN VAGINAL CYSTOCELE REPAIR.

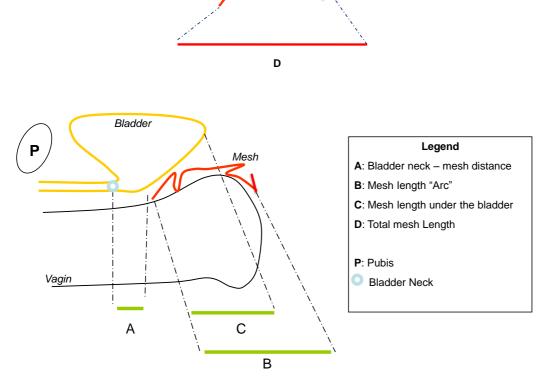
Hypothesis / aims of study

Ultrasonographic scan shows synthetic mesh used in vaginal cystocele repair. Pelvic position and contraction of the mesh can be followed up after surgery ^{1, 2}. Dislodgement and contraction are pointed to be a part of mesh complication repair, for prolapse recurrence. However, timing for ultrasonographic scans must be standardized. Surgical procedure influences multi parameters to localize the mesh.

The main objective was the evaluation of the mesh contraction after surgery by defining witch measurement and which period can notice information.

Study design, materials and methods

Thirty patients with a cystocele repair had the same procedure with polypropylene mesh, four arms trans obturator, Ugtex™ (Sofradim, Covidien™). Patients had systematically bladder derivation for 2 days and intra-vaginal pack during one night. The mesh was measured pre operatively (PO). Ultrasonographic scan was performed 2D/3D; intra vaginal and trans perineal, at the end of the procedure (D0), at 3 day (D3) and 6 week (W6) follow up. 3D mesh reconstruction and intra vaginal 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.



Results

Total mesh length in mid-sagittal plan is equal at D0 and D3 compare to pre operative clinical examination. Mesh contraction between W6 and PO was estimated to 30% (+/-8).

Mesh size decreased to 45% (+/-5) between PO and D0. Mesh increased to 12% (+/-2) between D0 and D3. From D3 to W6, mesh arc and total mid sagittal mesh length retracted to 13% (+/-2).

Interpretation of results

Mesh arc differences between PO and D0 were completely due to surgical procedure, with suspension techniques. We also notified folding or waving of the mesh. Between D0 and D3 we had less folding and waving of the mesh, probably due to 24h intra vaginal packing and eliminating hematoma, but we still had 10% of hematoma behind the mesh.

Mesh Size Follow up		РО	D0	D3	W6	
Mid sagittal Length size (%)		100	100	100	70	
Mesh "Arc"	(%)	100	55	67	54	

Concluding message

Mesh size decreased of 30% between PO and W6. Mesh part efficient under the vagina and supporting the bladder can be consider as the mesh arc. Mesh arc at W6 represent half (54%) of the total mesh length, measured PO. But surgical procedure modifies position and folding of the mesh until it becomes more fixed.

Between D3 and PO, mesh measurements had a lot of variation. We propose to evaluate the contraction of the polypropylene mesh used by vaginal route between D3 and W6, here evaluated to 13%.

Further studies should define an interaction between surgical procedure or polypropylene mesh characteristics and contraction.

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Specify source of funding or grant	No Grant
, ,	No conflict of interest
Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	Yes
Specify Name of Public Registry, Registration Number	CEROG
	2009
	007
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	CEROG
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes