

The Elevation Angle of the Vagina (EAV) following different pelvic reconstructive procedures

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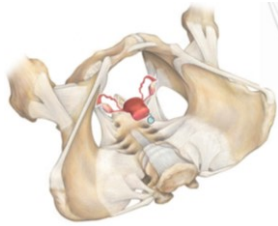
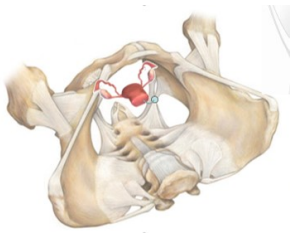
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Abstract

A change in practice patterns for pelvic organ prolapse (POP) among surgeons has been noted, reviewing the use of sacropexy and abdominal mesh implants. The choice of method has to be made carefully in operation planning. The aim of the study was to investigate the postoperative effect of the four standard therapies in POP by measurement of the EAV in MRI visible meshes:

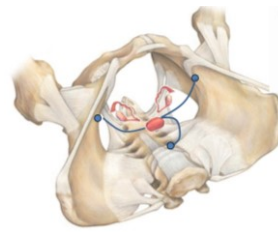
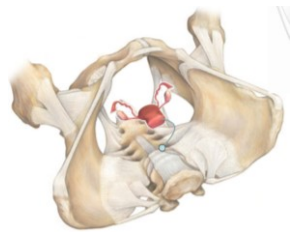
- classical vaginal sacrospinal fixation (Amreich-Richter)

- vaginal high medial sacrospinal fixation

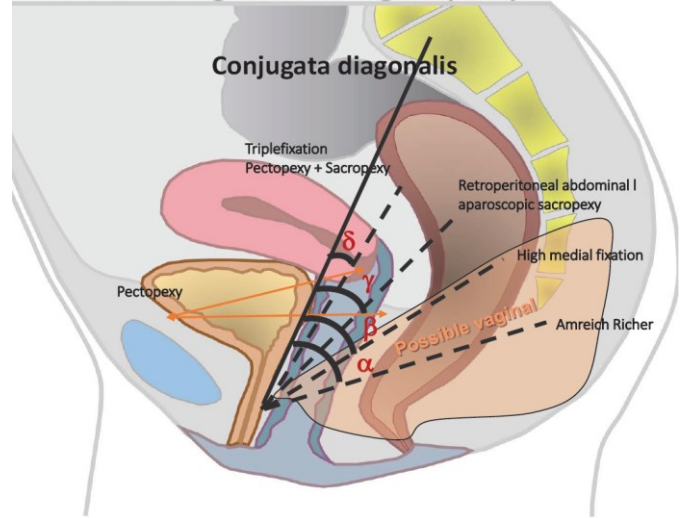


- laparoscopic sacrocervicopexy

- triplefixation (modified unilateral sacrocervicopexy and bilateral)



Elevation Angle of the Vagina (EAV)



Method dependent angle between
 ————— Conjugata diagonalis and the
 - - - - - line of apical vaginal fixation:

- δ = $11^\circ \pm 5^\circ$ Triplefixation Pectopexy + Sacropexy
(Elevation over the Distantia sacropubica \approx 50-57mm)
- γ = $21^\circ \pm 3^\circ$ Retroperitoneal abdominal laparoscopic sacropexy
(Elevation over the Distantia sacropubica \approx 35-48mm)
- β = $33^\circ \pm 3^\circ$ High medial fixation - vaginal with RSD
(Elevation over the Distantia sacropubica \approx 16-25mm)
- α = $50^\circ \pm 3^\circ$ Amreich Richter

Methods

Postoperative MRI of 30 patients from each of the four procedures were evaluated and the vaginal angle from the pelvic diagonal conjugate was measured. A lower EAV is represented by larger angle from the pelvic diagonal conjugate.

Results

We identified a variety of the EAV up to 5cm (+1.2/ -2.3cm) in the different procedures. The implantation of the classical Amreich-Richter-Procedure (vaginal sacrospinal fixation 1.5cm next to the spina ischium) was set as 0 in the EAV. By the use of the Reusable Suturing Device –RSD-Ney the high medial fixation was implanted up to the level of S3/ S4. The laparoscopic approach resulted in even higher fixation levels and therefore resulted in a higher EAV

Conclusion

We were able to objectively demonstrate that different pelvic floor reconstructive procedures result in different EAV and thus are not equivalent. This information may be significant for properly tailoring the type of procedure for each patient.

