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Title (type in CAPITAL LETTERS): PREVALENCE OF VAGINAL MESH EROSION WITH ABDOMINAL SACRAL COLPOPERINEOPEXY COMPARED TO COMBINED ABDOMINAL/VAGINAL SACRAL COLPOPERINEOPEXY.

Aims of Study: To compare the prevalence of vaginal mesh erosion between abdominal sacral colpoperineopexy and combined abdominal/vaginal colpoperineopexy and to identify risk factors for mesh erosion.

Methods: Retrospective analysis of all abdominal and combined abdominal/vaginal sacral colpoperineopexies performed at our institution between October 20, 1992 and February 9, 1999. Logistic regression models were developed to examine for independent variables associated with mesh erosion. A Cox proportional hazards model was developed to examine time to erosion between groups. We examined the following independent variables: use of combined procedure, method of combined colpoperineopexy, concurrent hysterectomy, estrogenized status, age, weight, and parity.

Results: Two hundred sixty three abdominal sacral vault suspensions with permanent synthetic mesh were performed. Of these, 30 were combined abdominal/posterior vaginal procedures. 25 of these were performed by vaginally attaching sutures to the perineal body and bringing them into the abdominal operative field through the cul-de-sac using a long needle or ring carrier. The mesh was then attached to these sutures without the mesh entering the vaginal operative field. In the other 5, the mesh was attached vaginally and passed into the abdominal surgical field. Patients had a mean age of 60.6(±10.6) years, mean weight of 70.8kg(±12.7), and median parity of 2(0-13). 43(16%) of the total patients underwent a concurrent hysterectomy and 224(85%) were estrogenized. The mean follow-up was 290 days (±415, range 13-2192). Overall, mesh erosion was observed in 11 patients (4%). The prevalence of mesh erosion was 3.0% (7/233) in the abdominal only group, 8.0% (2/25) in the combined group with suture passage only and 40% (2/5) in the group with vaginal mesh placement. Combination sacrocolpoperineopexy using sutures only was not associated with a significantly increased risk of vaginal mesh erosion, odds ratio = 2.2(95%CI 0.44-10.7), p=.34. Placement of mesh vaginally was the only variable found to be significantly associated with vaginal mesh erosion with an odds ratio of 18.1(95%CI 2.7-122.4). This variable retained its significance after controlling for other independent variables including combined procedure using suture passage alone, age, concurrent hysterectomy and estrogen status. The median number of days to mesh erosion was 437 in the abdominal only group, 240 in the suture only group, and 114 in the vaginal mesh group. The increased risk of mesh erosion with mesh placed vaginally was confirmed using a Cox proportional hazards model using time to mesh erosion as the outcome variable censored at the date of last follow-up (p<.001).

Conclusions: The prevalence of vaginal mesh erosion with the newer combined abdominal/vaginal sacral colpoperineopexy with suture passage was not observed to be significantly increased over the baseline rate associated with the traditional abdominal sacral colpoperineopexy. Placement of mesh vaginally during the combined procedure is associated with a significantly higher prevalence of vaginal mesh erosion.