Sex Differences in the Repair of Retinal Detachments in the United States

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Purpose:
To determine differences between women and men in the repair of rhegmatogenous retinal detachments (RRD) in the United States.

Methods:
Design: Retrospective cohort study.
Setting: A large insurance claims database.
Procedures: Demographic data, comorbid ocular conditions associated with RRD, systemic comorbidities, and surgical intervention (pneumatic retinopexy (PR), pars plana vitrectomy (PPV), laser barricade, or scleral buckle (SB)) were collected.
Main outcome measures: Odds of receipt of surgical intervention for incident RRD, time to repair, type of intervention, and the rate of reoperation by sex.

Results:
The study period included 133 million eligible records with 61,071 cases of incident RRD meeting inclusion criteria among which 43% \((n = 26,289)\) were women. Women had 34% reduced odds of receipt of surgical repair of an RRD (OR 0.66, 95% CI 0.59 – 0.73, \(p<0.001\)) after adjusting for confounders. This effect persisted in all sensitivity models. Among patients that received repair, women were more often delayed (0.17 days, \(p = 0.04\)). Women were more likely to undergo primary laser barricade (RRR 1.68, \(p < 0.001\)), primary SB (RRR 1.15, \(p < 0.001\)), and PR (RRR 1.07, \(p < 0.04\)) than men. The odds of reoperation were lower in women (OR 0.91, 95% CI 0.85 – 0.96, \(p=0.002\)) after adjustment.

Conclusions:
Insured women are less likely than insured men to receive surgical intervention for an RRD. If the odds of repair were equal between women and men in the U.S. then 781 more women would receive surgery each year, or 7,029 more during the study period. Women are more likely to have the repair performed with scleral buckle and laser barricade. The reason for these sex differences in RRD repair remains unknown and requires further investigation.