COMPARISON OF VAGINAL ULCER OCCURRENCE WITH PESSARY USE FOR PELVIC ORGAN PROLAPSE

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Background

The pelvic organs are supported by a complex set of pelvic muscles, ligaments, fascia, and bone, which together form a hammock structure in the base of the pelvis. Risk factors for pelvic organ prolapse include pregnancy, family history of pelvic organ prolapse, obesity, advancing age, prior hysterectomy, chronic constipation, and habitual coughing.

The prevalence of vaginal wall prolapse has been reported by The Women’s Health Initiative in the United States as 34%, with a prevalence of 19% for posterior wall prolapse and 14% for uterine prolapse on physical examination (Hendrix, 2002). Population-based surveys have found that 4 to 10 percent of women have symptoms of pelvic organ prolapse (Rortveit, 2007).

Mild pelvic organ prolapse that is asymptomatic does not require treatment. However, when the degree of prolapse affects quality of life, a pessary is a non-surgical option for relief of such symptoms as vaginal pressure, low backache and urinary obstruction.

Although modern pessaries are deemed safe, each is nonetheless a foreign object that is in contact with the vaginal mucosa. The most common complication associated with use of a pessary is the development of a vaginal ulcer (Ying, 2009).

Methodology

This is a retrospective, longitudinal, comparative study using a convenience sample of 90 pessary users. Subjects were from a nurse practitioner’s urogynecology practice located in South Portland, Maine. Co-morbidities were not considered in either the inclusion or exclusion criteria; inclusion criteria were limited to pessary use for at least six months in 2010. Study subjects varied in age from 42 to 96 years, with a mean age of 75.6 years, with varying levels of health.

Patients were seen in the office at 3 to 6 month intervals at which time the pessary was removed and a thorough vaginal exam was performed. There were patients who self-managed their pessaries by taking them out at weekly intervals for cleaning, as well as patients that relied upon these 3-6 month interval office visits for pessary removal and cleaning. This was not considered in the analysis.

A retrospective yearly view of the data was compared. Occurrence of a vaginal ulcer determined how the data was viewed: occurrence of a vaginal ulcer in the 2010 data prompted a chart review of 2009 and 2008 patient visits. This method allowed a consistent retrospective analysis, although it does not include the 40 patients who used a supported ring pessary versus a Gellhorn pessary for management of pelvic organ prolapse. We hypothesized there was no relationship between type of pessary used and occurrence of vaginal ulcers.

Use of Estrogen Cream

The literature supports the use of estrogen cream, as it has been shown that atrophic or non-estrogenized mucosa is more likely to be associated with vaginal ulcers (Hanson, 2005). Typically pessary users are advised to use vaginal estrogen cream. However, experience has shown that adherence to this advice varies widely. Failure to use the cream as recommended may contribute to the occurrence of vaginal ulcers. The prescribed dose in this study was 1 gram placed vaginally twice a week.

Gellhorn Pessaries

The Gellhorn pessary is an example of a space-filling pessary. It is three-dimensional, and differs from the supported ring in that it has a large base that supports the vaginal apex or cervix. There is a stem protruding from the center. This sits on the long axis of the vagina and keeps the circular base from rotating into the long axis of the vagina and being expelled. The base is slightly concave, allowing suction to form against the vagina, which helps hold the pessary in place. This feature can make it difficult to remove manually.

Analysis

Using a crosstabulation method for statistical analysis, we found that of the 40 patients who used a supported ring pessary, 95% had no vaginal ulcers. Of the 28 patients who used a Gellhorn pessary with a short stem, 64% had no vaginal ulcers, and of the 28 patients using a Gellhorn with a long stem, 77% had no vaginal ulcers. A Phi coefficient was calculated at 0.40, indicating these results are significant (p<0.001).

Conclusions

This study has been useful to gain a greater understanding of the population of pessary users and the rate of vaginal ulceration. The mean age of the women in this sample is 75.6 years, and the literature shows that women over the age of 72 are more likely than younger women to use a pessary for extended periods of time (Friedman, 2010). Extended use tends to lead to more vaginal ulcers, likely due in part to long-term effects of pressure from the pessary on the vaginal wall as well as simply having a longer period of exposure in which ulceration may occur. There is good reason to follow women carefully to reduce the incidence of vaginal ulcers, particularly for women who are using the pessary for many years. The data from this study argues for the continued use of the supported ring pessary whenever feasible. As this is a retrospective study and vaginal ulcers result in significant morbidity in older women, a larger, prospective study would be useful to verify our results.

Results

<table>
<thead>
<tr>
<th></th>
<th>Supported ring</th>
<th>Gellhorn with short stem</th>
<th>Gellhorn with long stem</th>
<th>Total</th>
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<tr>
<td>No ulcer</td>
<td>38</td>
<td>14</td>
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<tr>
<td>Ulcer ever</td>
<td>2</td>
<td>8</td>
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<tr>
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<td>N=22</td>
<td>N=28</td>
<td>N=90</td>
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</table>

Literature cited