# **Does treatment for cervical and vulvar dysplasia impact women's sexual health?**

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**H** uman papillomavirus (HPV) associated disease represents an immense public health burden worldwide. Approximately 80-90% of sexually active men and women will likely acquire HPV infection at least once in their lifetime.<sup>1</sup> HPV is associated with 530,000 new cases of cervical cancer and 270,000 cervical cancer deaths worldwide each year.<sup>2</sup> Although more than 120 types of HPV exist, 40 are known to affect the anogenital tract, with types 16 and 18 responsible for approximately 70% of cervical cancers.

Much is known about HPV virology, epidemiology, clinical manifestations, and prevention strategies including screening programs and prophylactic vaccines. Less is known about the impact of HPV infection on women's psychological and sexual well-being. Studies of the psychological effects of screening and diagnosis have documented that an abnormal Papanicolaou result and the time period before, during, and following colposcopy are associated with anxiety and distress.<sup>3-9</sup>

In addition, patients testing positive for HPV have increased anxiety, distress, Human papillomavirus—associated disease represents an immense public health burden worldwide. Persistent human papillomavirus infection can lead to the development of cervical dysplasia and vulvar dysplasia, both of which have been increasing in incidence in women in recent years. Numerous studies have focused on methods for screening and diagnosis of cervical dysplasia, but few have looked at the effects of treatment on women's psychological and sexual health. Even fewer studies have addressed these issues in women with vulvar dysplasia. The aim of this article was to provide a comprehensive review of the existing evidence concerning the impact of therapy for cervical and vulvar precancers on women's sexual function and sexual relationships. We performed a search of the medical literature for the time period up to and including August 2013 on PubMed. The findings from a limited number of studies to date indicate that psychosexual vulnerability increases after diagnosis and treatment of both cervical and vulvar dysplasia. More in-depth research is needed to better understand the effects of different treatment.

**Key words:** cervical intraepithelial neoplasia, dysplasia, human papillomavirus, sexual health, vulvar intraepithelial neoplasia

general concern,<sup>10</sup> and a significantly worse feeling about their sexual relationships<sup>11</sup>when compared with patients receiving negative test results.

Two small studies have looked at women's experiences in response to a diagnosis of vulvar intraepithelial neoplasia (VIN). One found that women

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experienced shock and a sensation of losing control of their bodies. <sup>12</sup> Another study found that women being followed up for VIN scored poorly on quality of life and sexual functioning assessments.<sup>13</sup>

Even less is known about the effects of treatment for HPV-associated disease on quality of life, sexual health, and sexual relationships. Most of the available literature is focused on outcomes in patients treated for cervical and vulvar malignancies. However, given the prevalence of HPV and the widespread adoption of HPV testing in screening protocols, the treatment of premalignant HPV-related disease is far more common than the treatment for cancer. The aim of this article was to provide a comprehensive review of the existing evidence concerning the impact of therapy for cervical and vulvar precancers on women's sexual function and sexual relationships.

We conducted a search of the medical literature up to and including August 2013 on PubMed using a number of

related terms including cervical dysplasia, vulvar dysplasia, human papillomavirus, sexual health, sexual function, psychosexual impact, psychological impact, treatment impact, and quality of life. The search was limited to English literature. We found a total of 6 articles that studied the impact on sexual health after treatment for cervical dysplasia (Table 1) and 5 articles that studied the impact on sexual health after treatment for vulvar dysplasia (Table 2). We excluded 2 pilot studies with a small sample size whose primary aim was not the impact of treatment for cervical dysplasia or vulvar dysplasia on women's sexual health.<sup>12,13</sup>

## Effects of treatment for cervical dysplasia on sexual health

Cervical HPV disease is manifested histologically as cervical intraepithelial neoplasia (CIN), which can be low grade (or CIN 1), reflecting productive viral infection that is usually self-limited, or high grade (HGCIN or CIN 2, CIN 3, or CIN 2/3), reflecting a neoplastic transformation that could progress to cancer in a low proportion of cases.

The standard of care is to monitor low-grade CIN until it resolves and to treat HGCIN. Treatment modalities include excisional procedures (cold-knife conization, large loop excision of the transformation zone/loop electrosurgical excision procedure [LLETZ/LEEP], and laser conization) or ablative procedures (cryotherapy and laser ablation).

We identified 6 studies that have looked specifically at the impact of CIN treatment on women's sexual health (Table 1). Four studies assessed the impact of LEEP. Juraskova et al<sup>14</sup> used a qualitative approach and found 3 main themes reported among 21 women treated with LEEP: issues of uncertainty, trust in one's body, and communication.

Following the diagnosis of CIN, women were most concerned about cancer, but in the posttreatment period, their concern evolved to a focus on future reproductive viability. With regard to the theme of communication, the study found that some women indicated an initial distancing from their partner, and women who were single indicated feeling a sense of relief at not being in a relationship while undergoing treatment.

The 3 other studies of the impact of LEEP used questionnaires to examine the domains of sexual function. Hellsten et al<sup>15</sup> used a modified version of a questionnaire first used by Campion et al<sup>16</sup>and later modified by Howells et al<sup>17</sup>to assess the impact of LEEP at 6 months and 2 years of follow-up. The study found a significant decrease in spontaneous interest, frequency of intercourse, and sexual arousal and a significant increase in negative feelings towards sex at 6 months among 45 women who were treated with LEEP compared with 52 women with dysplasia who had not undergone LEEP. At the 2-year follow-up, spontaneous interest and frequency of intercourse remained significantly decreased in the women who had undergone LEEP.

Similar results were found by Serati et al,<sup>18</sup>who used a validated questionnaire, the Female Sexual Function Index (FSFI), which measures 6 sexual domains (desire, arousal, lubrication, orgasm, satisfaction, and pain).<sup>19</sup> This study found that desire was significantly decreased after treatment, whereas the other domains were unaffected. Inna et al<sup>20</sup> used a self-designed questionnaire and found that frequency of sexual intercourse, dysmenorrhea, and dyspareunia after LEEP were not significantly different following treatment. However, overall sexual satisfaction, orgasmic satisfaction, and vaginal elasticity were significantly decreased up to 1 year following LEEP.

Campion et al<sup>16</sup> assessed the psychosexual impact of diagnosis and laser treatment of CIN using a self-designed questionnaire that interrogated the following aspects of sexuality: frequency of spontaneous sexual interest, frequency of intercourse, frequency of adequate vaginal lubrication and sexual arousal with intercourse, frequency of orgasm with intercourse, frequency of dyspareunia, and frequency of negative feelings toward intercourse. Women in the treatment group were treated for CIN with carbon dioxide laser and in the comparison groups were undergoing gynecological care for noncervical

disease but had partners who had been diagnosed with a sexually transmitted infection, either condyloma acuminata or nongonococcal urethritis. The authors found that women treated with laser experienced significantly decreased spontaneous sexual interest and frequency of intercourse, decreased vaginal lubrication and sexual arousal, and decreased frequency of orgasm when compared with controls. Women who were treated for CIN also demonstrated a significant increase in negative feelings toward sexual intercourse or toward a regular partner and increased dyspareunia, whereas women in the comparison group did not.

The age range for participants in this study was lower (17-26 years) than in the other studies in the literature (Table 1). This study found a decrease in sexual function among all 6 domains, whereas other studies found significant differences only among desire/spontaneous interest and frequency of intercourse.

One study evaluated the change in sexual function in women 1 year after cold-knife conization for cervical dysplasia.<sup>21</sup> The author conducted faceto-face interviews using a self-designed questionnaire to ask patients about the strength of libido, frequency of orgasm during intercourse, frequency of intercourse, and dyspareunia. No statistically significant differences were found before and after treatment regarding libido, frequency of orgasm, or frequency of intercourse, but there was a statistically significant decrease in the number of women experiencing dyspareunia. Although the results of this study did not follow the overall trends seen in the other studies, this was the only study in which the patients did not complete the questionnaire independently, so interviewer bias cannot be excluded.

#### Effects of treatment for vulvar dysplasia on sexual health

VIN is an HPV-associated squamous lesion of the vulva that can lead to cancer if left undiagnosed and untreated. Studies show an increasing incidence of VIN, especially among women younger than 50 years of age.<sup>22,23</sup> The recent pronounced rise in incidence may be Download English Version:

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