Effects of Hysterectomy on Women with Cervical Cancer

**Chart 1** Prevalence of urinary and sexual symptoms in the articles included in the review, which assessed the effects of hysterectomy for malignant causes

| No | Authors/Year       | Evaluated symptoms and prevalence                                                                 | Results                                                                                                                                                                                                 | JBI |
|----|--------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| 27 | Elghamrawi et al.  | Urinary incontinence: \(p = 0.313\): School: 7\%. Radiotherapy: 16\%. Sexual dysfunction: \(p = 0.145\): School: 20\%. Radiotherapy: 35\%. | There was no difference in urinary complaints in patients in the group submitted to radiation \(p = 0.313\). The frequency of sexual dysfunction was compared between the two groups, with no statistical difference, but related to age \(p = 0.145\). The younger the patient’s age, the greater the sexual complaint, regardless of the treatment modality. Sexual problems included dyspareunia due to vaginal shortening or stenosis, vulvar pain, and itching. | 100%|
| 36 | Hoogendam et al.   | LUTS: \(p = 0.88\): 19\%. Urinary tract infection: 17\%. Sexual dysfunctions (dyspareunia, decreased vaginal lubrication, reduced libido): 9\%. | LUTS (19\%) and sexual dysfunction (9\%) are present among the results of the study, such as long-term complications of assisted robotic laparoscopic radical hysterectomy, against early cervical cancer. | 100%|
| 37 | Plotti et al.      | Urinary incontinence: 28\%                                                                          | Regarding sexuality, the data indicated a good level of sexual pleasure involved with a slight worsening of sexual activity. Regarding urinary incontinence, this was reported in 28\% of cases and appeared to be mild and rarely disabling. | 100%|
| 9  | Selcuk et al.      | Urinary incontinence: \(p = 0.002\): RAH: 29\%. ASH: 28\%. CONTROL: 11\%. Urine incontinence: \(p = 0.007\): RAH: 16\%. ASH: 10\%. CONTROL: 3\%. Stress incontinence: \(p = 0.575\): RAH: 7\%. ASH: 8\%. CONTROL: 4\%. | Patients who underwent RAH had more irritating urinary symptoms than those in the control group \(p = 0.001\), there was also a significant difference when compared with SH \(p = 0.035\). The score for obstructive symptoms was also significantly higher in RAH \(p = 0.019\). Regarding the stress incontinence scores, there was no significant difference between the 3 comparison groups \(p = 0.890\) for RAH and \(p = 0.375\) for the control group. Regarding sexual symptoms, women who underwent RAH had a significantly lower score than in the other groups \(p = 0.001\). | 100%|
| 38 | Lalos et al.       | Before treatment—Urinary incontinence: 26\%. Nocturia: 13\%. Dyspareunia: 6\%. 1 year after treatment: \(p = 0.18\) Urinary incontinence: 31\%. Nocturia: 18\%. Dyspareunia: 6\%. | It was observed that there was no increase in the number of voluntary urination, urgency, and urinary incontinence episodes after 1 year of treatment \(p = 0.18\). Dyspareunia did not increase 1 year after treatment \(p = 0.05\). | 100%|
| 39 | Noronha et al.     | RH: Stress incontinence: 30\% \(p = 0.563\). Urge incontinence: 45\% \(p = 0.549\). Nocturia: 30\%. \(p = 0.535\) RT: Stress incontinence: 45\% \(p = 0.563\). Urge incontinence: 60\% \(p = 0.549\). Nocturia: 40\% \(p = 0.535\). RT + QT: Stress incontinence: 30\% \(p = 0.563\). Urge incontinence: 45\% \(p = 0.549\). Nocturia: 60\% \(p = 0.535\). | The groups were similar in the incidence of LUTS \(p = 0.56\), urinary urgency \(p = 0.44\), urge incontinence \(p = 0.54\) and nocturia \(p = 0.53\). The QT / RT group had a higher urinary frequency \(p < 0.001\). The patients in the RH group were more sexually active \(p = 0.01\) and had less dyspareunia \(p = 0.021\). Vaginal length was shorter in the RT \(5.5 \pm 1.9\) cm) and QT / RT \(5.3 \pm 1.5\) cm) group than in the RH group \((7.4 \pm 1.1\) cm) \(p < 0.001\). The muscular contraction of the pelvic floor was similar \(p = 0.302\). | 100%|
| 22 | Pieterse et al.    | LRH: \(p = N S\): Before surgery—Urinary incontinence: 25\%. | The results show that treatment against early cervical cancer results in an increase in subjective sexual and bladder function. | 100%|
| No | Authors/Year             | Evaluated symptoms and prevalence                                                                 | Results                                                                 | JBI |
|----|--------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----|
|    |                          | Dyspareunia: 5%.                                                                                   | 12 months after surgery-                                               |     |
|    |                          | Difficulty having orgasm: 10%.                                                                     | Urinary incontinence: 35%.                                            |     |
|    |                          | Dyspareunia: 12%.                                                                                   | 24 months after surgery-                                               |     |
|    |                          | Difficulty having orgasm: 19%.                                                                     | Urinary incontinence: 29%.                                            |     |
|    |                          | Dyspareunia: 16%.                                                                                   |                         |     |
|    |                          | Difficulty having orgasm: 14%.                                                                     | LRH-NS: (p = NS).                                                     |     |
|    |                          | Urinary incontinence: 35%.                                                                       | Before surgery-                                                      |     |
|    | Greer et al.             | Dyspareunia: 7%.                                                                                   | Urinary incontinence: 25%.                                            |     |
| 16 | (2010)16                | Difficulty having orgasm: 9%.                                                                     | Dyspareunia: 7%.                                                      |     |
|    |                          | 12 months after surgery-                                                                           | 12 months after surgery-                                               |     |
|    |                          | Urinary incontinence: 47%.                                                                       | Urinary incontinence: 47%.                                            |     |
|    |                          | Dyspareunia: 19%.                                                                                   | 24 months after surgery-                                               |     |
|    |                          | Difficulty having orgasm: 19%.                                                                     | Urinary incontinence: 44%.                                            |     |
|    |                          | Dyspareunia: 17%.                                                                                   |                         |     |
|    |                          | Difficulty having orgasm: 13%.                                                                     | LRH-NS: (p = NS).                                                     |     |
|    |                          | Urinary incontinence: 47%.                                                                       | Before surgery-                                                      |     |
|    |                          | Dyspareunia: 7%.                                                                                   | 12 months after surgery-                                               |     |
|    |                          | Difficulty having orgasm: 9%.                                                                     | Urinary incontinence: 47%.                                            |     |
|    |                          | 12 months after surgery-                                                                           | 24 months after surgery-                                               |     |
|    |                          | Urinary incontinence: 47%.                                                                       | Urinary incontinence: 44%.                                            |     |
|    |                          | Dyspareunia: 17%.                                                                                   |                         |     |
|    |                          | Difficulty having orgasm: 13%.                                                                     | LRH-NS: (p = NS).                                                     |     |

There was no difference in prevalence between pre and postoperative in the two techniques.

Abbreviations: ASH, abdominal subtotal hysterectomy; LRH – NS, laparoscopic radical hysterectomy – nerve sparing; LRH, radical hysterectomy; LUTS, lower urinary tract symptoms; QT, chemotherapy; RAH, radical abdominal hysterectomy; RH, radical hysterectomy; RT, radiotherapy; TAH, total abdominal hysterectomy.
| N° | Authors/year | Country | Objective | Study design | Sample | Average Age | Data collection instrument and/or quality of life | Measuring instruments | Follow-up period (PRE AND POSTSURGERY) |
|---|--------------|---------|-----------|-------------|--------|-------------|-----------------------------------------------|-----------------------|--------------------------------------|
| 27 | Elghamrawi et al. (2011) | Egypt | To report the quality of life and late effects of radiotherapy or surgery among women treated for cervical cancer and previously free of disease, for 5 years or more. | Retrospective cohort | TAH: (n = 41) RT: (n = 57) | 98 women, with an average age of 50.8 years, diagnosed and treated against cervical cancer (stage IA, IIA, and IIB), without metastasis and free of the disease for 5 years or more, on the date of data collection. | WHO scoring system | – | 5 years after treatment. |
| 36 | Hoogendam et al. (2014) | Netherlands | Report the oncological outcome and long-term complications of robotic laparoscopic radical hysterectomy assisted in the early stage of cervical cancer. | Retrospective cohort | – | 100 patients with primary cervical cancer, treated at a tertiary referral center. Average age: 41 years. | CTCAE scale, version 4.3. | Anamnesis and complete physical examination. | Follow-up of 3 months (in the first year), 4 months (in the second year), and 6 months in the past 3 years. |
| 37 | Plotti et al. (2018) | Italy | To investigate long-term quality of life and long-term urinary and sexual function in cervical cancer survivors previously treated with radical abdominal hysterectomy. | Retrospective cohort | – | 90 patients diagnosed with locally advanced cervical cancer (stage IB2 - IVA), complete response to treatment 36 months later, sexually active, without chronic diseases, without a history of another cancer, without pelvic inflammatory disease and without the use of antidepressants. Average age: 55.6 years. | QLQ-CX24, QLQ-C30 questionnaire e Incontinence Impact Questionnaire | – | 49 months after the end of treatment. |
| 09 | Selcuk et al. (2016) | Turkey | To assess the impact of simple abdominal and radical abdominal hysterectomy on all aspects of pelvic floor dysfunction. | Retrospective cohort | TAH: 41 patients undergoing radical abdominal hysterectomy to treat cervical cancer. SAH: 58 patients undergoing simple abdominal | 142 women. **Average age:** TAH: 52.49 years. SAH: 50.34 years. NO SURGERIES: 49.21 years. | Urogenital distress Inventory (UDI-6); Incontinence impact questionnaire (IIQ-7); Pelvic floor and incontinence sexual impact questionnaire (PISQ-12). | – | It does not appear in the text. |
| N° | Authors/year | Country | Objective | Study design | Sample | Average Age | Data collection instrument and / or quality of life | Measuring instruments | Follow-up period (PRE AND POSTSURGERY) |
|----|--------------|---------|-----------|-------------|--------|-------------|--------------------------------------------------|-----------------------|--------------------------------------|
| 38 | Lalos et al. (2009) | Sweden | Search for information on the occurrence of urinary, climacteric, and sexual symptoms in women with cervical cancer. | Prospective cohort | 39 women with cervical cancer, mean age 43 years. | Questionnaires standardized by the research institution | Before treatment. 1 year after treatment. |
| 39 | Noronha et al. (2012) | Brazil | Describe the impact of surgery, radiotherapy and chemoradiation on pelvic floor functions in patients with cervical cancer. | Prospective cohort | TAH: 20 Women undergoing radical hysterectomy. RT: 20 Women undergoing radiation therapy. QT + RT: 20 Women undergoing chemoradiation. | 60 patients. Average age: TAH: 50.3 years RT: 52.9 years QT + RT: 51.5 years | Questionnaires standardized by the research institution | It does not appear in the text. |
| 22 | Pieterse et al. (2013) | Netherlands | To evaluate self-reported morbidity due to various types of treatment in patients with cervical cancer. | Prospective cohort | LRH NS: 123 undergoing radical laparoscopic hysterectomy with nerve preservation. LRH: 106 undergoing conventional laparoscopic radical hysterectomies. | 229 patients. Average age: LRH NS: 45 years LRH: 43.57 years | Dutch Gynecologic Leiden Questionnaire | Before treatment. 1 year after treatment. 2 years after treatment. |
| 16 | Greer et al. (2010) | England | Second to an original study, lower urinary tract symptoms, POP, sexual function and quality of life, 9 years after total abdominal hysterectomy and total supracervical hysterectomy. | Cross-sectional | TAH: 27 who underwent total abdominal hysterectomy. SUPRACERVICAL Hysterectomy: 27 who underwent total supracervical hysterectomy. | 54 women. Average age: TAH: 40.8 years SUPRACERVICAL Hysterectomy: 41.8 years | Questionnaires used in the original study | 9 years after hysterectomy |

Abbreviations: CTCAE, common terminology criteria for adverse event; QT, chemotherapy; RLH, radical laparoscopic hysterectomy; RLH-NS, radical laparoscopic hysterectomy- nerve sparing; RT, radiotherapy; SAH, simple abdominal hysterectomy; TAH, total abdominal hysterectomy.