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CASE REPORT

Radical Parametrectomy, Upper Vaginectomy and Pelvic Lymphadenectomy of Invasive Cervical Cancer Following Simple Hysterectomy : Report of 3 Cases

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ABSTRACT

Three cases of early invasive cervical cancer found incidentally after simple hysterectomy are reported. Radical re-operation of radical parametrectomy, upper vaginectomy, and pelvic lymphadenectomy was carried out in these patients without serious perioperative morbidity. Although the operation seems to be technically more difficult than the Wertheim operation, it is an attractive option in selected patients especially young women with no clinical evidence of residual tumor. Such operation should be done by gynecologic surgeon experienced in Wertheim operation.

Key words : Cervical cancer, After simple hysterectomy

The standard treatment of early invasive cervical cancer included either radical hysterectomy or radiation therapy. Both treatment modalities have been accepted as equally effective in terms of local control and survival. Although radical hysterectomy and pelvic lymphadenectomy appears to be sufficient for early-stage cervical cancer, some condition occurs when the invasive lesion is found incidentally in the specimen obtained from simple hysterectomy. This condition, called cut-through hysterectomy, indicates the need for further therapy either radiation[1-3] or radical re-operation[4-5] to eliminate the risk of residual disease in the vaginal cuff, paravaginal tissues, paracervical tissues, and pelvic lymph nodes.

Radical re-operation is an interesting option since ovarian function and vaginal pliability can be preserved. If no tumor is present in the surgical specimen, radiation can be avoided and survival approaches 100%.[5] This report presents our experience with radical parametrectomy, upper vaginectomy, and pelvic lymphadenectomy in 3 patients undergoing inadvertent simple hysterectomy of invasive cervical cancer.

The surgical technique was summarized as follows. The patient was placed in moderate Trendelenburg position with 60° abduction of both thighs and slight extension of hip joints. A sponge-stick was inserted in the vagina to identify the vaginal apex and facilitate dissection of the bladder and rectum. The round ligaments were clamped, cut, and

ligated to open the broad ligaments. The ureters were identified, and the paravesical and pararectal spaces were bluntly developed. Pelvic node dissection was carried out over the common, external, internal iliac, and obturator fossa. The vaginal apex was identified by pushing from below along with posterior counter-traction on the rectosigmoid. The peritoneum behind the vagina was incised and the rectum was reflected posteriorly. The uterosacral, vaginosacral, and cardinal ligaments were clamped, cut, and ligated adjacent to the sacrum and pelvic side wall respectively. The peritoneum overlying the bladder was incised close to the vaginal apex and reflected downward. The ureters were dissected from the peritoneum. The superior and inferior surface of the ureter were exposed and freed all the way to its entrance into the bladder. The paravaginal tissues were clamped, cut and ligated. The vagina was entered at the anterior wall and cut transversely to remove the specimen.

Case 1

A 36-year-old woman with carcinoma in situ (CIS) on Papanicolaou smear had microinvasive squamous cell carcinoma on cervical biopsy in a provincial hospital. Excisional cervical biopsy with electrical loop revealed CIS with unknown status of surgical margins. No endocervical curettage was performed following the procedure. She underwent simple hysterectomy. The pathological report showed invasive squamous cell carcinoma located in the endocervix. The surgical margins were negative. The patient was referred on August 5, 1998, or 43 days after the operation to receive further treatment at Chiang Mai University (CMU) Hospital.

On physical and pelvic examination, no gross residual disease was found at the vaginal apex, paravaginal, and parametrial areas. Basic laboratory investigation and radiological study were normal. After counselling on the treatment options, she decided to undergo radical re-operation, which was performed on August 17, 1998. The operative time was 4.0 hours. The estimated blood loss was 500 ml requiring 360 ml of blood transfusion. Postoperative hospital stay was 8 days without serious complication. Pathologic findings of the surgical specimens showed no evidence of disease in the vagina, the parametrial and paravaginal tissues. No lymphadenopathy was noted. No tumor recurrence occurred after close follow-up for 22 months post operatively.

Case 2

A 49-year-old woman underwent exploratory laparotomy in a provincial hospital for ovarian tumor without preoperative Pap smear. The pathologic findings were low malignant potential endometrioid tumor of the ovary and invasive adenocarcinoma of the cervix. The surgical margins were uninvolved. She was referred to CMU Hospital on August 18, 1998 or 22 days after the operation.

On physical and pelvic exam, no residual tumor was found at the vaginal apex, paravaginal, and parametrial areas. No lymph node enlargement was noted on supraclavicular and inguinal regions. Routine laboratory investigation and x-ray study were normal. After being given the counselling on the treatment plan, she decided to undergo radical re-operation which was scheduled on September 14, 1998. The operative time was 5.0 hours. The estimated blood loss was 800 ml. requiring 560 ml. of blood transfusion.

The postoperative period of 14 days was without serious morbidity. No pathologic evidence of residual tumor was found in the re-exploratory specimens. All lymph nodes were negative for malignancy. Unfortunately, vaginal recurrence with peritoneal carcinomatosis occurred 9 months after the second operation. She was further treated with chemoradiation but failed to control the disease. She died from severe cachexia 6 months after the tumor recurrence.

Case 3

A 52-year-old woman with CIS on Pap smear underwent colposcopic examination in a provincial hospital which showed CIS on colposcopically directed

cervical biopsy. Simple hysterectomy was carried out resulting in invasive squamous cell carcinoma of the cervix with free surgical margins. She was referred to CMU Hospital on April 27, 1999 or 25 days after the operation.

No gross residual tumor was found at the vaginal apex, paravaginal, and parametrial tissues on pelvic examination. Basic laboratory data and x-ray study were normal. She was diagnosed as presumed stage IB of cervical cancer. Radical re-operation was performed on May 17, 1999. The operative time was 4.5 hours. The estimated blood loss was 300 ml. The postoperative period of 10 days was uneventful. Pathology of the specimens revealed no residual tumor in the vagina, the parametrial and paravaginal tissues. No evidence of lymph node metastasis was detected. After follow-up for 12 months, no tumor recurrence was noted.

Discussion

Unexpected invasive cervical cancer found in simple hysterectomy specimen can be treated with either radiation or radical re-operation with equal efficacy if the surgical margins are negative and no gross residual tumor is noted. The survival rate in these patients is comparable to those undergoing primary radical hysterectomy or radiation therapy for stage IB cervical cancer.[6] Orr and colleagues reported their experience with radical parametrectomy, upper vaginectomy and pelvic lymphadenectomy in 23 patients undergoing simple hysterectomy in the presence of invasive cervical cancer. Although the re-operation seem to be technically more difficult than radical hysterectomy, there was no significant difference in terms of operative time, blood loss, and perioperative morbidity. Such operation obviated the need for adjuvant radiation therapy in more than 73% of patients. The survival rate was 96% after a median follow-up of 3 years.[5] However, this favorable outcome is likely due to the fact that all patients have negative surgical margins after simple hysterectomy, and to the fact that the majority of patients had no residual tumor in the re-operation specimens.

In the report of Chapman and co-workers on radical re-operation in 18 patients found to have unexpected invasive cervical cancer after simple hysterectomy, the operative morbidity was consistent with that of patients undergoing primary radical hysterectomy. The overall 5-year survival was 89% which is comparable to those undergoing primary radical surgery or radiation therapy.[4] Kinney et al recently reported an 82% 5-year survival rate for patients undergoing radical re-operation of invasive cervical cancer found at simple hysterectomy.[7] The re-operation appears to be technically easier if performed at least 4 weeks after the initial operation because the inflammation has resolved and the surgical planes can be easily dissected.[4]

Radical re-operation after hysterectomy should be considered in selected cases. The patient should be thoroughly clinically evaluated prior to the second surgery, to minimize the risk of receiving adjuvant pelvic radiation after two pelvic operations. Young women with no clinical evidence of residual tumor are the most appropriate surgical candidates since they are generally healthy to tolerate two major operations within a short interval, and with very limited disease, they are unlikely to have indications for postoperative radiation.

In summary, radical parametrectomy, upper vaginectomy, and pelvic lymphadenectomy is an attractive operation and may be safely performed in selected patients found to have invasive cervical cancer following simple hysterectomy. Such operation should be done by gynecologic surgeon experienced in Wertheim operation.

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