

COMPLICATIONS OF RADICAL HYSTERECTOMY AND PELVIC LYMPHADENECTOMY IN 120 EARLY STAGE CERVICAL CANCERS

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Abstract - We evaluated the clinical experience of 120 women with early stage cervical cancer who underwent radical hysterectomy combined with pelvic lymphadenectomy (class III Rutledge) in our gynecologic oncology clinic .

Of these, 74 patients. (61.66%) were in stage I and 46 patients. (38.34%) were in stage IIa.

Intraoperation complications comprised of great vessel injuries encountered in 4 (3.3%) patients. Postoperative complications included 12 (10%) bladder dysfunction, 2 (1.66%) lymphocyst formation, 10 (8.3%) urinary infection, 8 (7%) wound infection, 10 (8.3%) pelvic infections and 5 (4.16%) acute ileus. However, no death occurred due to intraoperative or postoperative complications. Pelvic lymph metastases were observed in 22 patients. Para-aortic lymph node metastases were diagnosed in 6 (2.5%) patients all of whom fell in stage II.

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INTRODUCTION

The idea of the surgical removal of a cervical cancer can be accredited to J. Marian Sims in the early 1870s; however the surgical technique of radical hysterectomy was developed by Wertheim about 1900. X-irradiation and radium were discovered in the late 1890s.; with their therapeutic use against cervical cancer being recognized about 1900. In most institutions the initial therapy for locally advanced disease and for all stages above stage I and IIa is radiotherapy. On the other hand, the choice of treatment in patients with early stage cervical cancer is either radiotherapy or surgery and several studies have shown no significant difference in survival (1,4). Thus, the choice of treatment modality is mainly influenced by the age and general health of the patients, by the experience of the surgeon and by the complications rates of the group for surgery for treatment of cervical cancer consists of radical hysterectomy and pelvic lymphadenectomy (RH + PLN).

During the last half a century, improvements in

anesthesia, electrolyte therapy, blood transfusion, antibiotics, and operative techniques have afforded gynecologic oncologists the opportunity to offer their patients with early invasive cervical carcinoma radical surgery with a high survival rate and with negligible morbidity and mortality. We aim to present the incidence and ranking of complications experienced in our department in women with early stage cervical cancer undergoing radical surgery.

MATERIALS AND METHODS

Since July 1993 to June 1998, 120 women with early stage (stage Ib, IIa) cervical cancer underwent RH+PLN (class III Rutledge) (4,5) by three members of the division of gynecologic oncology at Vali-e-asr hospital. We Performed RH + PLN in patients with tumors equal to or less than 4 cm. Staging of cervical cancer based on guidelines of FIGO (The international federation of gynecology and obstetrics) (4,5). In our center, radical hysterectomy entailed removal of entire cardinal and uterosacral ligaments, and upper third of vagina (Rutledge III) (Wertheim). Pelvic lymphadenectomy was performed by removing all nodal tissue from the bifurcation of aorta down to the obturator fossa. Intra-operative evaluation of the para-aortic lymph nodes by frozen section was routine by conducted.

Ninety - nine percent of patients were relatively healthy with at most mild to moderate systemic disease controlled with medication. From 120 cases, 74 patients (61.66%) were in stage I, and 46 Pts (38.34%) were in stage IIa. All patients received prophylactic antibiotic. Blood loss was measured at the completion of surgery from the suctioned fluids and weighing sponges after subtracting irrigation fluids. Operative time was measured from the time of skin incision to closure of the skin. Intraoperative complication (5,6,9) were defined as an inadvertent enterotomy or cystotomy, laceration of a great vessel, transection of a ureter, or transection of the obturator nerve. Postoperative complications (10,11) were separated into infections

erythematous wound), while noninfectious complications were defined as the occurrence of a wound dehiscence, deep venous thrombosis, fistula, ileus, bowel obstruction, hematoma, postoperative hemorrhage, or lymphocyst formation. Bladder function was objectively assessed after removal of urinary catheter by performing post-void residual catheterizations. Normal was defined as residual less than 150 cc.

RESULTS

120 patients having cervical cancer underwent surgery by 3 qualified surgeons. All the patients underwent radical hysterectomy (Rutledge III) and pelvic lymphadenectomy. The mean age of the patients was 44 years. Out of 120 patients, 74 patients (61.66%) were in stage I and 49 patients (38.34%) were in stage IIa. Table 1 depicts the pathological characteristics of the patients' tumors. The tumors diameter had been 3 cm or less than that in 98 patients. 89% of the tumors were pure squamous cell carcinoma, 10% pure adenocarcinoma and 1% as adenosquamous carcinoma.

Pelvic lymph node metastases were observed in 22 patients, 6% of the aforementioned patients had positive paraaortic lymph nodes suffice it to say that the latter group fell in stage II. The mean operative time were 3.5h. Morbidity is listed in table 2. No operative or post operative deaths occurred.

Table 1. Pathologic characteristics of the patient's tumors

	N	%
Histology		
SCC	107	89
Adeno	12	10
Adeno/SCC	1	1
Grade		
1	40	33.4
2	50	41.6
3	30	2.5
Stage		
Ib	74	61.66
IIa	46	38.34
Pelvic lymph node		
Negative	98	82
Positive	22	18
Para-aortic Lymph node		
Negative	114	97.5
Positive	6	2.5

The mean blood loss was 860 ml. Four patients (3.3%) experienced intraoperative complications. Postoperative complications, were observed in 47 patients. Postoperative infectious complications occurred

in 28 patients (23%). The infectious sites included urinary tract, 10 (8%); wound, 8 (7%); and the pelvis 10 (8%). Postoperative noninfectious complication occurred in 19 patients (15.8%). These complications included acute ileus, 5 (4.16%); pelvic lymphocyst, 2 (1.66%); and bladder dysfunction 12 (10%). The over all use of hemologous blood transfusion (intraoperative or postoperative) was 33%. The mean post operative hospital stay was 6 days.

Table 2. Morbidity Rate of morbidity of the patients

	N	%
Post-op noninfectious		
Complications	19	15.8
bladder dysfunction	12	10
Lymphocyst formation	2	1.66
acute ileus	5	4.16
Post-op infectious		
Complications	28	23
urinary infection	10	8.3
wound infection	8	7
pelvic infection	10	8.3
Intra-op complications	4	3.3
great vessel laceration	4	3.3
Transfusion	40	33

DISCUSSION

The major complications of RH + PLN are formation of ureteral fistula and lymphocysts, pelvic infection, and hemorrhage. Fistulas and ureteric complications have been the great concern of the gynecology oncologists for many years. Trauma to the ureters and bladder base during radical hysterectomy and ischemia resulting in the destruction of the intrinsic blood supply are the main causes of ureterovaginal and vesicovaginal fistula. Recently, intraoperative injury of the lower urinary tract has been reduced along with the improvement in surgical techniques and instrumentation. Urological complications did not occur in our series, but recently 3.3% have been reported by Ayhan and coworker (5,6,9). The most common intraoperative complication in our series was great vessel injuries, which occurred in 3.3% patients Bosze and coworker, (912) in 1993 reported perioperative complication of 116 RH + PLN and stated that injury to the great vessels was a major problem. Fistula formation did not occur in our series. Ralph and coworkers (13,14) reported a fistula formation rate following surgery of 4.6%, all occurred in patients with stage IIb disease. Bladder dysfunction was seen in 10% of patients being the most frequent post operative complication in our series which was within the range of 10 to over 50% reported previously (5,6,7,8,9-14). The incidence of pelvic lymphocyst in our study (1.7%) was

similar to the 2 and 3% recently reported in the literature (6), although a wide range of higher rate was quoted previously (10). Our series included both symptomatic and asymptomatic cases diagnosed by ultrasound.

One of these lymphoceles (50%) was aspirated percutaneously in order to prevent infection and ureteric obstruction because of its urologic were larger size (>5cm).

Given the favorable results for survival, freedom from recurrence, and low rate of serious surgical complications, plus the advantages of ovarian conservation and preserving a functional vagina-in contrast to radiation therapy), radical hysterectomy with pelvic lymphadenectomy is an excellent form of therapy for selected patients with early invasive cervical carcinoma. In light of these findings, we conclude that that since the overall incidence of complications still remains high, the procedure must be performed by a skilled surgeon with sufficient experience to reduce morbidity.

REFERENCES

1. Artman LE et al: Radical hysterectomy and pelvic lymphadenectomy for stage Ib carcinoma of the cervix; 21 years experience. *Gynecol Oncol* 28: 8; 1987.
2. Hopkins MP, Morley GW; Radical hysterectomy versus radiation therapy for stage Ib squamous cell cancer of cervix; cancer 68: 272; 1991.
3. Jakobsen A et al: Is radical hysterectomy always necessary in early cervical cancer; *Gynecol. Oncol.* 39: 80; 1990.
4. Hugh M. Shingleton MD. Facs; Distinguished professor series surgery for cervical cancer: *Gynecol Oncol* 69: 8-13; 1998.
5. Philip J., William T. Invasive cervical cancer; Disaia J; Creasman T. *clinical Gynecol. Oncol.* 5th edition. London; Mosby: 51-100; 1997.
6. Ayham A. Tuncer 25 yarali H; Complications of radical hysterectomy in women with early stage cervical cancer; clinical analysis of 270 cases. *Eur. J. Surg Oncol*, 17: 492-494; 1991.
7. Disaia J. Creasman T.; Complication of irradiation and radical surgery for gynecologic malignancies, *Gynecol Oncol.* 48: 571-577; 1993.
8. Boskovic V; Glisic A; Petkovic S; Radical hysterectomy with pelvic lymphadenectomy in patients with carcinoma of the uterine cervix-3 years experience; *Srp Arh celok Lek* 126 (5-6). 183-7 May - Jun 1998.
9. Micheal A; Finan; MD et al; Body mass. predicts the survival of patients with new International Federation of Gynecology and obstetrics stage IBI and IBII cervical carcinoma treated with radical hysterectomy. *American cancer Society* 1998.
10. Covens A; MD; Rosen B; MD, et al. Diefferences in the morbidity of radical hysterectomy between Gynecological oncologists *Gynecol; Oncology* 51; 34-45; 1993.
11. Bruce patsner; MD and thomas E. Hackett D.O-Use of the omental J-Flap for prevention if post operative complications following radiel abdominal hysterectomy *Gynecol Oncol* 25: 246; 1996.
12. Bosze P; Meszaro I; Palfalvi L. ungear L; Perioperative complication of 116 RH+PLN *Eur J Surg Oncol.* 19: 605-608; 1993.
13. Raph G; Tanussino K; Lichtenegger W; Urological complications after radical hysterectomy with and without radiotherapy for cervical cancer. *Arch Gyn Obs* 248: 61-65; 1990.
14. Scotti RJ. Bergman A, Bhatia NN. Ostergard Dr; Urodynamic changes in uretrovesical function after radical hysterectomy. *Obs. Gyn.* 68: 111-119; 1986.