RS Global

ISSN 2413-1032

WORLD SCIENCE

Multidisciplinary Scientific Edition

ISSN 2413-1032

WORLD SCIENCE

№ 1(29)
Vol.3, January 2018

Publisher –
RS Global Sp. z O.O.,

Scientific Educational Center
Warsaw, Poland

Numer KRS: 0000672864
REGON: 367026200
NIP: 5213776394

Publisher Office's address:
Dolna 17,
Warsaw, Poland,
00-773

Website: https://ws-conference.com/
E-mail: rsglobal.poland@gmail.com
Tel: +4(857) 898 55 10

CONTENTS

MEDICINE

PHARMACY

OPTIMAL SURGICAL TREATMENT OF LOCALLY ADVANCED GYNECOLOGICAL MALIGNANCIES

Zaporozhan V. M. MD, DSc, CEO,
Tkachenko O. I., MD, DSc,
Maksymovskyj V. Y., MD, PhD,
Mashukov A. O., MD, PhD,
Pyrogov V. V., MBBS

Ukraine, Odessa, Odessa National Medical Universtity,
Department of Surgery № 4 with a Course of Oncology

Absctract. *The article presents our experience of advanced gynecological malignancies surgical treatment. We retrospectively analyzed 1215 cases of gynecological malignancies and selected 313 patients with locally advanced disease. All patients undergone surgical treatment in University Clinic of Odessa national medical university from 2006 till 2017. 32 HIPEC procedures were included in this study, 24 with cytoreduction. One-year survival was 88,6 % for cervical cancer, 85,2 % for ovarian cancer, 79,1 % for endometrial cancer. Five and ten year survival rate was 31 % and 14 % among ovarian cancer patients, 18 % and 9 % for ovarian cancer, 38 % and 18 % for endometrial cancer respectively. Cytoreduction with HIPEC were well tolerated with no perioperative mortality.*

Keywords: *Gynecological malignancy, HIPEC, cytoreduction, pelvic exenteration, urinary diversion.*

Introduction. Development of more effective approaches in surgical treatment of malignant gynecological pelvic tumors remains an actual oncologic problem. Despite recent advances in early diagnosis many patients present with regionally advanced tumors or even metastatic spread [1]. Another problem is local recurrence in pelvic cavity of malignant tumors, like rectal, ovarian, uterine cancer [2,3]. Large pelvic masses lead to intestinal, ureteral obstruction, are frequently complicated by recurrent hemorrhage. Palliative systemic chemotherapy is contraindicated in such conditions. Obviously, more sophisticated methods of combined treatment need to be developed in order to improve oncological results, to alleviate the quality of life.

Objectives. To determine the efficacy and safety of complex surgical treatment for advanced and recurrent gynecological pelvic malignancies.

Materials and methods. We retrospectively analyzed 1215 cases of gynecological malignancies and selected 313 patients with locally advanced disease. All patients undergone treatment in University Clinic of Odessa national medical university from 2006 till 2017. Data about primary tumor localization is presented in Table 1.

Table 1. Primary tumor characteristics

Localization	Number of patients		FIGO III-IV		Recurrence after treatment	
	n	%	n	%	n	%
Cervical cancer	406	33,4	150	47,9	17	4,2
Endometrial cancer	389	32,0	72	23,0	9	2,3
Ovarian cancer	420	34,6	91	29,0	30	7,1
Overall	1215		313		56	

Preoperative investigations included clinical assessment, general laboratory tests, CT scans of abdominal, pelvic, chest cavities and retroperitoneum, cystoscopy, rigid sigmoidoscopy. Head CT was indicated if brain metastasis suspected. In selected cases PET CT was additionally needed.

Surgical treatment depended on disease stage, local spread. Despite differences among clinical cases, operative techniques shared some common features. Initially ureters were mobilized, held with tourniquets. Tumor mass was excised en block. In case of urinary bladder wall involvement, frozen specimens were obtained to assess resected margins. If rectum was involved, we performed low anterior or abdominopelvic resection.

In patients with good prognosis anterior, posterior or total pelvic exenteration was done with urinary bladder resection, psoas hitch and Boari flap ureteroneocystostomy. These also was

appropriate for selected cases without extensive urinary bladder infiltration, where 2/3 of volume could be preserved and no bladder neck lesion was seen.

Patients with intermediate prognosis and life expectancy less then 3 years, patients after pelvic radiation therapy required total pelvic exenteration with sigmoidostomy and ureterosigmoidostomy for urine derivation.

Briker ileal conduit urinary diversion after posterior, anterior and total pelvic exenteration was performed in patients with good and intermediate prognosis with life expectancy more than 3 years or after radiation therapy.

Since 2016 our clinic performs cytoreductive surgery with hyperthermic intraperitoneal chemoperfusion for ovarian cancer with peritoneal involvement. 32 HIPEC procedures were included in this study, 24 with cytoreduction. Optimal cytoreduction precluded closed-abdomen HIPEC on Performer HT (Rand Biotec, Italy). The combination of cisplatin (100 mg/m2) and doxorubicin (25 mg/m2) in 4000 ml of carrier solution irrigated abdominal cavity with the flow rate 600-1200 ml/min. After the temperature reached 41-42 C the perfusion lasted 60-90 minutes (depending on cytoreduction volume).

Cytoreduction was performed in cases with malignant carcinomatosis involvement [4]. However, the optimal cytoreduction was contraindicated if extensive mesentery involvement, distant metastasis of irresectable lymphadenopathy were present. Bowel obstruction was also considered an absolute contraindication [5].

Results. A total of 313 patients were included in the study. The mean patient age was 48,3 ± 5 years (range, 34-70 years). 94 pateients underwent modified radical hysterectomy, 86 - classical radical hysterectomy, 75 patients – Bochman hysterectomy, 58 – excision of recurrent tumor. Operative approaches included omentectomy (n=286, 91,4 %), extended pelvic lymphadenectomy (n=174, 55,6 %), urinary bladder resection (n=110, 35,1 %) with psoas hitch unilateral ureterocystoneostome (n=35, 11,2 %) or bilateral ureteroneocystostomy (n=24, 7,7 %). Anterior (n=15, 4,8 %) or abdominoperineal (n=3, 1,0 %) resection of the rectum was required in cases of direct bowel invasion. Anterior pelvic evisceration with Briker ileal conduit was performed in 16 patients (5,1 %) with advanced local tumor spread. 12 patients (3,8 %) underwent posterior pelvic exenteration and 3 (1,0 %) – total. Selective peritonectomy was done in 24 (7,7 %) cases.

Intraoperative and postoperative periods were complicated by wound infection (n=24, 7,7 %), bleeding (n=7, 2,2 %), ureteral anastomosis stricture (n=3, 1,0 %), vesical fistula (n=4, 1,3 %), hypogastric arteries injury (n=2, 0,6 %), intestinal anastomosis leakage (n=3, 1,0 %), pulmonary embolism (n=3, 1,0 %). Overal postoperative mortality was 12 cases due to major hemorrhage (n=6, 1,9 %), pulmonary embolism (n=3, 1,0 %), peritonitis (n-3, 1,0 %).

One-year survival was 88,6 % for cervical cancer, 85,2 % for ovarian cancer, 79,1 % for emdometrial cancer. Five and ten year survival rate was 31 % and 14 % among ovarian cancer patients, 18 % and 9 % for ovarian cancer, 38 % and 18 % for endometrial cancer respectively.

There were no systemic complication in cytoreduction and HIPEC group, however 1 case of hemorrhage (4,1 %), 1 bowel perforation (4,1 %) occurred. No perioperative mortality was observed.

Discussion. Some principles were developed basing on our surgical experience of advanced gynecology oncology treatment. Adequate transabdominal incision is necessary. Good visualization of major vessels, ureters, obturator nerve may help to define tumor topographical relations and avoid inadvertent iatrogenic injuries. Affected ureters must be resected enough with frozen section of surgical margins to achieve radical excision. Ureters should be manipulated gently regarding their blood supply. Prior to extended lymphadenectomy it is essential to ligate internal hypogastric arteries and occlude internal hypogastric arteries temporarily in order to prevent major hemorrhage when accidently tearing blood vessels.

Conclusions.

1. Extensive urinary tract lesion should not limit surgical approach in treatment of advanced pelvic malignancies.
2. Bowel reconstruction possibility depends on its tumor invasion. Taking into account complexity of surgical treatment it is more suitable to perform ostomy with further possible reconstruction.
3. Limited carcinomatosis is not a contraindication for surgery. Cytoreduction and HIPEC is an appropriate treatment option in selected cases, depending on peritoneal carcinomatosis index, tumor biological properties.

REFERENCES

1. Cytoreductive surgery followed by intraperitoneal hyperthermic perfusion in the treatment of recurrent epithelial ovarian cancer: a phase II clinical study / M. Deraco, C. R. Rossi et al. Tumori. 2001. Vol. 87, № 3. P. 120-126.

2. Does hyperthermia induce peritoneal damage in continuous hyperthermic peritoneal perfusion? / A. Shido, S. Ohmura, K. Yamamoto et al. World J. Surg. 2000. Vol. 24. P. 507-511.

3. Extensive cytoreductive surgery combined with intraoperative intraperitoneal perfusion with cisplatin under hyperthermic conditions (OVHIPEC) in patients with recurrent ovarian cancer: a feasibility pilot / F. A. Zoetmulder, M. M. Kaag, J. H. Beijnemn et al. Eur J. Surg. Oncol. 2000. Vol. 26, № 7. P. 663-668

4. Factors predicting survival after intraperitoneal hyperthermic chemotherapy with mitomycin C after cytoreductive surgery for patients with peritoneal carcinomatosis / P. Shen, E. A. Levine, J. Hall et al. Arch. Surg. 2003. Vol. 138, № 1. P. 26-33.

5. Intraperitoneal cisplatin with regional hyperthermia in advanced ovarian cancer: Pharmacokinetics and cisplatin-DNA adducts formation in patients and ovarian cancer lines / P. J. M. van der Vaart, N. van der Vange, F. A. N. Zoetm ulder et al. Eur. J. Cancer. 1998. Vol 34, № 1. P. 148-154.