OBSERVATIONS WITH SURGICAL MANAGEMENT OF GYNAECOLOGICAL CANCERS- AH REGIONAL CANCER CENTRE EXPERIENCE

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ABSTRACT

BACKGROUND

Oncosurgery plays a very important role in management of gynaecological cancers. With modern anaesthetic techniques, blood transfusion services and intensive care facilities, gyn-oncosurgery in the form of primary radical/secondary cytoreductive or palliative surgery can be offered to patients in all stages of cancer.

This is a retrospective analysis of gynaecologic cancer cases who underwent surgery with or without chemotherapy. The study aims at observing the response of these individual cancers to surgery alone or surgery and adjuvant therapy and calculates the 5-year disease-free survival of these cases.

MATERIALS AND METHODS

A total number of 2242 gynaecological cancer patients who underwent various surgical procedures during April 2006-March 2011 were taken up for studying their individual response to the particular surgery. The patients were categorised into site-specific gynaecological cancers and the type of surgery they underwent was noted. Adjuvant treatment if given was noted. All patients were followed up for 5 years or more.

RESULTS

It was observed that of the total number of female genital cancers attending the gyn-oncology OPD of A.H. Regional Cancer Centre over a period of 5 years, only 11.6% were operable. In case of uterine cancers, postoperative adjuvant radiotherapy was required in 28.4% of cancer cervix and in 23.7% cancer corpus patients. All cases of cancer ovary needed adjuvant therapy (chemotherapy/chemotherapy and radiotherapy). All cases of cancer vagina required postoperative adjuvant radiotherapy, whereas none of the vulval cancers needed radiotherapy. Five-year disease-free survival was 75.4% in cancer cervix, 100% with cancer uterine corpus and vulvovaginal cancers and 66.7% with ovarian cancers.

CONCLUSION

This retrospective analysis reveals that surgery alone should be the primary mode of treatment for all operative gynaecological cancers. Adjuvant treatment should be offered when and wherever necessary.

KEYWORDS

Oncosurgery, Gynaecological Cancers, Cytoreduction, Disease-Free-Survival.

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BACKGROUND

Innovations in oncosurgery, anaesthesia and availability of blood transfusion services and ICU facilities has permitted surgery to be offered to all patients with female genital cancers in all stages. The role of surgery varies from radical in early stages to palliative in advanced stages. Operability in the radical form claims optimum results in most cases of uterine cancers. Similar results are also obtained in vulvovaginal cancers. Ovarian malignancies pose a challenge for the oncosurgeons as most of them present in late stages. Even then, the oncosurgeon helps in staging laparotomy, whereby maximum possible cytoreduction of the tumour is attempted, so that the postoperative chemotherapy gives optimum results. Audits in England show that management of gynaecological cancers in a teaching centre, where specialist treatment and higher patient input and multidisciplinary teamwork are all more probable is associated with better survival in ovarian, cervical and endometrial carcinoma- Tilling K, Wolfe CD et al.[1] In advanced stages or treatment failure cases, palliative surgery improves survival dramatically. An attempt is made to analyse the response of various gynaecological malignancies to different surgical procedures and to study the advantages and disadvantages of surgery as a form of treatment for cancer.

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MATERIALS AND METHODS

This study was conducted in Acharya Harihar Regional Cancer Centre, Cuttack, Odisha. The total number of new

cancer cases were 9191, out of which 2242 (24.4%), suffered from gynaecological malignancies. The individual gynaecological cancers underwent different surgical procedures. A retrospective analysis of these 2242 gyn-cancer patients of whom 262 patients were operated during the period April 2006-March 2011 was done. All these cases were followed up for 5 years or more.

RESULTS

Site	Total Number	Number of Operable	Percentage Operable
Cervix	2108	184	8.75%
Corpus	26	26	100%
Ovary	74	46	62.16%
Vagina	31	3	9.7%
Vulva	3	3	100%
Total	**2242**	**262**	**11.9%**
Table 1. Distribution of Cases			

Of the total number of 2242 gynaecological cancers admitted over a period of 5 years, 11.69% of cases were operable. The disease specific operability figures were 8.75% with cancer cervix, 100% with cancer uterine corpus, 62.16% with cancer ovary, 9.7% with cancer vagina and 100% with cancer vulva.

Site	SCC-No.	SCC-%	Adenocarcinoma Number	Adenocarcinoma Carcinoma %
Cervix	176	95.7%	8	4.3%
Corpus	7	26.9%	19	73.1%
Table 2. Uterine Cancers HP-Types				

Squamous cell carcinoma was common with cervix, whereas adenocarcinoma was common with corpus cancer.

Site	Surgery Radical/Type I Hyst	Surgery + RT
Cervix	127 (72.1%)	57 (31%)
Corpus	20 (76.5%)	6 (23.7%)
Table 3. Treatment of Uterine Cancer		

Table 3 shows that only 31% of cervical carcinomas and 23.7% of corpus cancer required adjuvant radiotherapy.

Histopathology	Number of Cases	Percentage
Adenocarcinoma	56	75.7%
Metastatic	7	9.5%
Dysgerminoma	6	8%
Granulosa cell tumour	4	5.4%
Teratocarcinoma	1	1.4%
Table 4. Ovarian Malignancies - Histopathology		

Table 4 shows a histopathological predominance of adenocarcinomas in the ovarian cancers. We also had one case of teratocarcinoma in the series.

Treatment	No.	%	PR-No.	PR%	CR-No.	CR%
S_X +CT	34	45.9%	12	35.2%	11	32.4%
NACT+S_x +POCT	5	6.8%	3	60%	2	40%
Pr CT	28	37.8%	19	57.9%	9	32.1%
S_x + RT	3	4.1%	1	33.3%	2	66.7%
S_x + RT+ CT	4	5.4%	1	25%	3	75%
Table 5. Ovarian Cancer - Treatment Response						

Table 5 shows that surgery was the first line of treatment in 55.4% of cases followed by chemotherapy or radiotherapy depending on the histopathological type. The response chart shows best result (75%), when combined treatment in form of surgery, radiotherapy and chemotherapy was given.

Site	HP	S_x	S_x + RT	Surv %
Vagina	WD-SCC	-	3	100%
Vulva	MD-SCC	3	-	100%
Table 6. Carcinoma Vagina and Vulva				

Surgical procedure for Ca vagina was-hysterocolpectomy and that for Ca vulva was radical vulvectomy with inguinofemoral lymphadenectomy.

Site	S_x	Morbidity	Mortality	Mortality
CaCx	Rad hyst	Sepsis, pelvic cellulitis, burst abdomen, urological complications, lymphocyst	Haemorrhage, transfusion reaction	
Ca Corp	RH/Type I hyst		No deaths in type I hyst	
Ca Ovary	Staging lap+ primary/sec cytoreduc	Hypovol shock, peritoneal fistula, embolism	Depends on HP and stage	
Ca Vag	Hysterocolpectomy	Urorectal injuries, other common postoperative complications	Nil	
Ca Vulva	Radical vulvectomy	Wound dehiscence, graft rejection, lymphoedema, vaginal stenosis, stress incontinence	Nil	
Table 7. Complications of Surgery				

Table 7 enumerates the complications encountered during the various surgical procedures. Majority of the complications were managed with appropriate treatment. There were two intraop ureteric injuries, which were immediately dealt with ureterovesical anastomosis. Two other cases developed ischaemic ureterovaginal fistula, which were repaired 3 months after surgery. All urological complications did well after treatment.

Site	S_x	S_x+RT	S_x+CT	S_x+RT+CT
CaCx	81.1%	75.4%		
Ca Corpus	100%	100%		
Ca Ovary	-	33.3%	66.7%	7%
Ca Vag	-	100%	-	-
Ca Vulva	100%	-	-	-

Table 8. 5-Year Survival with NED

Table 8 shows the five-year survival figures with surgery and/or adjuvant RT or CT. It was observed that in cancer cervix, it was 81.1% with surgery, and 75.4% with surgery and RT.

Cancer uterine corpus and cancer vulva showed an excellent disease-free survival of 100% with surgery alone. On the other hand cancer, ovary and cancer vagina showed improved survival when adjuvant CT/RT/CT+RT was given.

DISCUSSION

Of the total number of 2242 cases, new gynaecological cancer admissions in our institute over a period of 5 years, only 11.5% of cases were operable (Table 1).

In our study, the disease specific operability rate was 8.75% in case of cancer cervix, 100% in case of cancer corpus and cancer vulva, 9.7% in case of cancer vagina and 62.16% in case of cancer ovary. The vast load of inoperable cases on booking reflected the ignorance of the developing countries. Table 1 and 3 show the histopathological type of the uterine cancers and the mode of treatment, the cases received as per site. Of the uterine cancers, cancer cervix showed a predominance of squamous cell cancer and majority (73.1%) cancer corpus were adenocarcinomas. Similar site-specific HP reports of uterine cancers have been reported by Van Nagell J, Donaldson E et al[2] 1997.

Adjuvant postoperative radiotherapy in form of EBRT and brachytherapy was required in 31% of cancer cervix and 23.7% of cancer corpus, respectively. In the series reported by Soisson AP, Soper JP et al[3] 1990, "adjuvant radiotherapy is widely prescribed to reduce the risk of recurrence in women with positive nodes."

Ovarian malignancies showed a wide spectrum of histopathology, of which adenocarcinoma was commonest (75.7%) Table 4. Complete surgical staging with primary cytoreduction was done in early operable cases followed by postoperative chemotherapy, but in advanced cancer ovary, neoadjuvant chemotherapy was given followed by interval cytoreductive surgery followed by postoperative chemotherapy. The chemotherapy regimens the patients had received were either CMF regimen (cyclophosphamide+methotrexate+5 fluorouracil) or CPR regimen (cisplatin+cyclophosphamide) or pacli-carbo regimen (paclitaxel+carboplatin). In our series, the highest complete response was obtained when surgery was followed by RT+CT (75%).

"Surgery is currently the first intervention used to treat ovarian cancer, but most women the disease is far too advanced by the time of diagnosis for complete removal of the tumour to be possible- "Arabella Mellville, Alison Eastwood et al[4] 1999."

As per dictum, ovarian cancer irrespective of stage deserves staging laparotomy first. It is surprising, how accurate staging biopsy, debulking and even radical surgery becomes simpler. Optimum chemotherapy is only possible with the exact knowledge of the histopathology of the lesion.

Table 6 shows that vulval cancer who underwent radical vulvectomy with bilateral lymphadenectomy achieved a cure of 100% with surgery; whereas, the operable vaginal cancers needed postoperative adjuvant radiotherapy after surgery. Reports by Burke T, Levenback C et al[5] 1995 state that even wide radical excision with selective inguinal lymphadenectomy gives equally good results. Ozgul Nezat MD, Basaran Derman MD et al[6] 2016 observed the radical hysterectomy and total abdominal vaginectomy for primary vaginal cancer gave wonderful survival result in early stages.

The commonest complications encountered with radical hysterectomy in case of cancer cervix was bladder dysfunction and urological injuries. In our study, two cases had intraoperative ureteric injury and two case had post of ischaemic ureterovesical fistula. The former were managed by ureterovesical anastomosis immediately and the latter were repaired 3 months postoperatively. All patients are doing well. Fei-Chi, Hann-Chorng Kua et al[7] said that with improved technique, urinary tract injury is becoming an increasingly rare complication, however, bladder dysfunction due to nerve injury persists. The incidence of urological injuries during radical hysterectomy as reported by Wu K, Zhang WH, Zhang R, et al[8], was 0.5%; bladder dysfunction was 10%; lymphocst was 7.8% and wound infection was 1.4%. Lymphocysts and lymphoedema was common with all radical surgeries and was more noticed in radical vulvectomy. Meticulous lymphatic dissection without injuring lymphatics, tension-free closure and use of suction drains will prevent wound dehiscence, lymphocyst and lymphoedema.

The five-year disease-free survival results as observed in Table 8 prove that an optimum survival of 100% was achieved with surgery only in case of cancer vulva and with surgery only/surgery + RT in case of cancer corpus and cancer vagina. In cancer cervix undergoing radical hysterectomy a 5 years DFS was noted in 81.1% and those treated with surgery + RT, it was 75.4%. "A retrospective survey of women treated for stage I cancer cervix in Scotland reported 86.3% 5-year survival after radical hysterectomy and 68% after non-radical hysterectomy" Averette HE, Ford JH, Dudan RC, et al.[9] The findings of Berrino F, Gatta G, Sant M et al,[10] suggest that 90% of women with endometrial cancer treated by primary surgery (total abdominal hysterectomy or more extensive surgery) and the 5-year survival rates are 70% only.

In cancer ovary, survival results depended on the volume of cytoreduction achieved and adjuvant therapy was needed in all cases. A 5 years DFS of 66.7% was observed in cases treated with surgery + CT, 33% was noted in cases treated with surgery + RT and 7% in cases treated with surgery + CT+RT. Many centres across the world show similar results.

CONCLUSION

Two hundred and sixty cases of operable gynaecological malignancies who underwent different surgical procedures were analysed with respect to their response to these procedures and the obvious advantages obtained. It was noticed that in cancer cervix surgery offered the best option in younger patients and with less than 4 cm lesion. A disease-free survival was seen in 87.1% in this group.

Cancer corpus showed excellent response to surgery. Surgery in the form of staging laparotomy was the optimum treatment of ovarian cancers, whereby accurate staging, biopsy and complete cytoreduction, ameliorated the survival outcome. A five-year disease-free survival was observed when chemotherapy and radiotherapy were combined. The response of vaginal cancer to surgery was optimum when radiotherapy was supplemented. Furthermore, surgery preserved the functional vagina. Fortunately, all the vulval caners presented as early stage II lesions and a disease-free survival of 100% was obtained with surgery alone as lymph nodes were negative. The only disadvantage of this malignancy is that with surgery morbidity overruled mortality.

Thus through this retrospective analysis it can concluded surgery alone should be the primary mode of treatment of all operable gynaecological malignancies. Since a malignant lesion is operable, only in its inception, countrywide efforts should be undertaken to catch the disease early. In this regard, steps must be taken in a developing country like ours to educate the womanhood about the cardinal symptoms and signs, so that they seek medical aid instantly. Measures must also be taken to screen the risk group and advise them on prevention.

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