EXPERIENCE WITH PELVIC MASSES FOLLOWING HYSTERECTOMY FOR BENIGN DISEASES

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This observational analytic study was carried out in gynae unit II, Jinnah Hospital, Lahore from January 2001 – Dec 2003 to evaluate nature, clinical presentation and treatment of pelvic masses which appear after hysterectomy. The ages of patients ranged from 30-65 years. In a total of 43 cases, 34 (79.1%) patients were operated abdominally and 9 (20.9%) patients underwent vaginal hysterectomy at least 1 year ago. Nine (20.9%) patients had lost operation record so ovarian conservation or removal could not be ascertained. According to sonographic appearance 24 (55.8%) patients had simple unilocular cyst, 8 (18.6%) had complex mass and 11 (25.6%) presented with solid mass. Eleven (22.58%) patients were managed conservatively with spontaneous resolution. Twelve (27.9%) patients were treated with USS guided aspiration. Nineteen (44.18) patients with complex and solid masses were managed surgically. Masses were benign/malignant ovarian tumours, hydrosalpinx, fluid loculation with bowel, retroperitoneal tumours and broad ligament cyst. Among these 19 patients two sustained small bowel injury intraoperatively. Postoperative complications of wound included infection in two and deep vain thrombosis in one patient.

Key Words: *Pelvic mass, Hysterectomy, ultrasonography (USS), Ophorectomy*

INTRODUCTION

Hysterectomy is a common gynaecological operation and over 75,000 hysterectomies are carried out in U.K[1] in one year. Apart from genital tract malignancies various benign diseases may necessitate hysterectomy such as dysfunctional uterine bleeding, fibroids, endometriosis, adenomyosis, prolapse, ovarian tumours and massive obstetric haemorrhage. Pelvic masses after hysterectomy can arise from conserved ovaries, ovarian remnants, fallopian tubes, broad ligament, retroperitoneal space, bladder and bowel. Ultrasonography has proved a remarkable diagnostic tool which not only help to determine origin but also suggest features which distinguish between benign and malignant masses[2]. Limited data is available in literature which addresses this problem in gynaecological patients. The purpose of this study was to share our experience on the nature of pelvic masses which appear after hysterectomy for benign diseases in our population along with its management.

PATIENTS AND METHODS

This study was carried out in the department of Obstetric and Gynaecology of Jinnah Hospital between January 2001-December 2003. It comprised of 43 patients who presented in out patient department following hysterectomy at least 1 year ago. After detailed history and clinical examination operation notes were reviewed. Apart from screening tests, detailed ultrasound was carried out. On the basis of ultrasonography, pelvic masses were classified as simple unilocular masses, complex and solid mass. In suspected cases of ovarian malignancy CA 125 blood levels were checked. Patients selected for treatment in simple unilocular mass group were advised serial ultrasonography. Criteria for ultrasound guided aspiration[3] were simple unilocular cyst, >8cm, wall thickness 3mm, no solid component, no septae and no debris in cyst.

Patients with complex and solid masses (who necessitated laparotomy) were hospitalized.

RESULTS

In this study of 43 patients, age range was between 30-65 years. Mean age was 42.3 years. Among these, 34 (79.1%) women underwent abdominal hysterectomy whereas 9 (20.9%) were operated vaginally as shown in Table 1.

Among 4 obstetric operations, 3 were subtotal and 1 was total hysterectomy. Multiple indications

for which operations were carried out are shown in table 2.

Table I: *Types of Hysterectomy.*

Type of Operation	No. of Patients	Percentage
Abdominal hysterectomy (TAH) - Non-obstetric - Obstetric	34 30 4	79.1
Vaginal hysterectomy	9	20.9

Vaginal hysterectomy = VH.

Table 2: *Indications for hysterectomy.*

Indications	No. of Patients	Percentage.
DUB	10	23.2
Prolapse	06	13.9
Fibroid	05	11.6
PPH	04	9.3
Ovarian Cyst	04	9.3
Adenomyosis	03	6.9
Endometriosis	02	4.6
No. Record	09	20.9

DUB = Dysfunctional uterine bleeding.

On reviewing the operation notes it was confirmed that 19 (44.3%) patients had conservation of both ovaries at surgery. In 6 (13.9%) women one tube and ovary were conserved. Bilateral salpingo-oophorectomy (BSO) was carried out in 9 (20.9%) patients. Ovarian status i.e., conservation or removal could not be ascertained in 9 (20.9%) women due to non-availability of medical record as shown in table 3.

Table 3: *Ovarian status at hysterectomy.*

Ovarian Status	No. of Patients	Percentage
Hysterectomy Only Obstetric VH TAH	19 04 09 06	44.3
TAH + BSO	09	20.9
TAH + Unilateral SO	06	13.9
Unknown	09	20.9

Clinical presentation in 43 cases is shown in table 4.

Table 4: *Symptoms of patients.*

Symptoms	No. of Patients	Percentage
Pain / discomfort in abdomen	15	34.9
Mass abdomen	09	20.9
Abdominal distention	04	9.3
GIT symptoms	03	6.9
Urinary symptoms	02	4.8
Pelvic heaviness	04	9.3
Asymptomatic	06	13.9

According to ultrasonography 24 (55.8%) patients had simple unilocular cyst, 8 (18.6%) had complex mass and 11 (25.8%) women had solid mass as shown in table 5.

Table 5: *Sonographic appearance of masses.*

USS Appearance	No. of Patients	Percentage
Simple unilocular	24	55.8
Complex masses	08	18.6
Solid masses	11	25.6

Among of 24 women with simple unilocular cyst, 1 was diagnosed as a case of distended bladder after catheterisatoin. She was referred to urology department. Expectant management was adopted in 11 (22.58%) patients. Ultrasound guided aspiration was carried out in 12 (27.9%) patients. Only 2 women required a second aspiration tap and fluid cytology in all cases was negative for malignant cells. Laparotomy was carried out in 19(44.18%) patients with complex and solid masses and intraoperative findings are shown in table 6.

In a total of 19 women, 2 sustained small bowel injury intraoperatively. They were repaired with no adverse sequalae. Two patients suffered from post-operative pyrexia due to wound infection. One patient developed deep vein thrombosis that was managed with no adverse outcome.

Table 6: *Intraoperative findings.*

Findings	No. of Patients
Ovarian Tumours	10
Benign	4
Malignant	6
Hydrosalpinx	3
Fluid loculation with small bowel	3
Retroperitoneal tumours	2
Broad ligament	1

DISCUSSION

Generally hysterectomy is regarded by females as end of gynaecological problems but emergence of a pelvic mass subsequently has profound physical and psychological impact. Our preliminary study has looked into various possibilities along with its management. Youngest patient in our series was aged 33 years, she underwent hysterectomy for massive post partum haemorrhage at age 27.

Only 20.9% women were operated vaginally, that is in accordance with the experience of others[4]. Abdominal hysterectomy is still the commonest approach even if pre-requisite for vaginal approach are fulfilled. VH is the state of art for a gynaecologist who needs to have a good experience. Krige[5] has rightly dictated "the surgeon's list of indications not only reveal is mental attitude towards the operation but also his confidence or lack of operative abilities and techniques." The incidence of VH to AH varies from 1:4 and ideally ratio should be reversed [(4)]. Multiple indications of operation in our series were in accordance with world literature. In 20.9% women indications of surgery and ovarian status could not be ascertained due to non availability of operation record. It must be emphasized to all health professionals in periphery especially to provide comprehensive operation notes and histopathology record to patients once discharged. Out of 9 patients 7 were operated in small towns and no histopathology of uterus was carried out.

Pelvic masses can originate from conserved ovaries either single or both, ovarian remnants[6], retained fallopian tubes, broad ligament, retroperitoneal structures and other pelvic viscera. In our study common source was ovaries as retained in 25 women and status was unknown in 9 women due to non availability of operation record. Ovarian carcinoma is regarded as a silent killer and rank number one in mortalities caused by gynaecological cancers. Cancers can originate from ovarian remnants as well[7].

Oophorectomy after menopause is a standard procedure with hysterectomy but it is technically more difficult with vaginal hysterectomy. Common practice is to leave healthy ovaries behind if vaginal hysterectomy is performed in post-menopaused women for prolapse, as facilities for laparoscopic assisted vaginal hystercetomy are very limited even in teaching hospitals. This practice should be discouraged as in our study 4 out of 6 women with malignant ovarian tumours underwent vaginal hysterectomy after menopause with retained ovaries. Pelvic masses have wide spectrum of imaging characteristics[6] and clinical manifestations. Ultrasonography (either abdominal or vaginal), Doppler is important in diagnosis, in monitoring and determining malignant potential and is cost-effective[8]. CT scan and MRI can also be considered as useful adjuvants. In our study 24 (55.8%) women presented with simple unilocular cyst, 8 (18.6%) with complex mass and 11 (25.6%) with solid mass. Many disease processes my fit into more than one sonographic appearance. Hydrosalpinx may appear as unilocular cyst but often has the appearance of a complex mass. Ovarian remnant might appear as simple cyst or multilocular cyst or multiseptate mass with a rim of vascularised solid tissue[7].

In our study 11 (22.58%) women were managed conservatively with simple unilocular cyst with complete resolution in 6-12 month. USS guided aspiration[3] in 12 (27.9%) women resulted in a cure. At laparotomy ovarian tumours were excised. In suspected malignancy staging and debulking were carried out. After histopathology report malignant cases were referred to oncology department. Salpingectomy was carried out for hydrosalpinx. Apart from conventional approach laparoscopic salpingectomy and salpingostomy have promising results[8]. In 2 patients retroperitoneal lipomas were removed with the help of a general surgeon. These tumours constitute difficult management problem. In retroperitoneal sarcomas resection is difficult, current chemotherapy is not effective and radiation is limited by toxicity to adjacent structures. Luckily in the present series series both tumours were benign and resectable. Two patients sustained small bowel injury during dissection of pelvic masses which were repaired interoperatively with no sequalae.

CONCLUSION

Emergence of pelvic mass after hysterectomy poses diagnostic and therapeutic challenge to gynaecologists. Review of operation notes are of immence help regarding indications of surgery, ovarian conservation or removal and the state of

pelvic structures. Proper documentation is important on the part of medical staff and care of notes and histopathology report should be a part of post-operative counselling. Oophorectomy should be encouraged with vaginal hysterectomy after menopause. It needs meticulous surgical training to residents. Operative intervention after hysterectomy needs careful dissection with bowel preparation as adhesions is common in such cases.

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