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Original Research Article

## Gynecological disorders in geriatric women regarding their frequency, diagnosis and management in the state of Himachal Pradesh, India

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### ABSTRACT

**Background:** Geriatric gynaecological problems have not received adequate attention in India. This study was undertaken to assess gynaecological disorders in geriatric women regarding their frequency, diagnosis and management in Himachal Pradesh, India.

**Methods:** It was a prospective observational study of patients aged above 60 years, admitted in Gynecology ward, IGMC Shimla over one year. Spectrum of gynecological disorder, comorbidities, diagnosis and management were noted and analyzed.

**Results:** 224 patients aged 60 years and above were admitted over a period of one year. The commonest presenting complaint was postmenopausal bleeding in 41.07% of patients. 80.80% patients had one or more comorbid conditions. Malignancy was the most frequent diagnosis 54% followed by uterovaginal prolapse in 30.35%. Ovarian cancer constituted 47.93% followed by cervical cancer 31.40%. 89.65% patients of ovarian cancer had surgical treatment whereas only 21.05% of cervical cancer patients underwent surgical treatment and rest were referred for radiation. In 62 out of 68 cases of pelvic organ prolapse had definitive surgical treatment.

**Conclusions:** Pelvic organ prolapse and genital malignancy are the major gynecological causes of hospital admissions in the patients above 60 years. Ovarian and endometrial cancer are showing a rising trend in this age group. Cervical cancer was the second most common malignancy in this group and most of these patients presented at advanced stage. Therefore, recommendations to discontinue screening in older age groups must be viewed with caution.

**Keywords:** Geriatric women, Genital malignancy, Gynecological disorders, Ovarian and endometrial cancer

### INTRODUCTION

The word Geriatrics was coined by Dr. Ignatz Natcher an Austrian physician in 1909. However, it was in 1935 that a British doctor Marjory Warren, working in USA first developed the practical concept of geriatric rehabilitation. With her initiation the elderly patients were gradually taken over by teaching hospitals.<sup>1</sup>

Many studies from developed countries defined older persons as those aged more than 65 years, whereas some

use the cut off of 60 yrs. Life expectancy of India is 61 years as compared to 72 to 82 years in the developed countries. Thus, the cutoff of 65 years may not be appropriate in Indian context and therefore a lower cut off of greater than and equal to 60 years is used.<sup>2</sup>

A major challenge for the world in the 21<sup>st</sup> century is the ageing of its population<sup>2</sup>. The world's elderly population is growing at a rate of 2.4% per year. The age shift is the result of reduced birth rates, improvement in health and nutrition and increased longevity. The aging population

has a direct effect on health-care delivery because it is associated with a new disease patterns as well as transitions in economic, social and even ethical issues.<sup>3</sup>

The Indian society which was pyramidal till 20<sup>th</sup> century, has become rectangular today and morbidity related to geriatric gynaecological problems is on the rise.<sup>4</sup> In India the number of people aged more than 60 years has grown from 5.4% in 1951 to 8.4% in 2011 and is projected to become 12.5% by 2025. As per the census of 2011, whereas for total Indian population, sex ratio is in favor of male population in ratio 940:1000, however for elderly at sixty years and above population it is in favour of elderly women by 1022:1000. There are 50.33 million elderly women in India as per 2011 census.<sup>5</sup>

Gynaecological disorders in older women differ from those who are younger. Elderly women experience vasomotor, urogenital, psychosomatic, psychological symptoms and sexual dysfunction. These urogenital changes make women vulnerable to gynaecological morbidities. Common gynaecological problems encountered in elderly women are vulvovaginal inflammation, genital prolapse, postmenopausal bleeding, malignancy and alteration in bladder function.<sup>6</sup>

The risk of developing Gynecologic tumor is highest in geriatric women when compared with women aged up to 60 years. Those over the age of 65 have a higher risk of developing cancer of the uterus (two fold), ovaries (three fold) and Cervix (10% increased risk)<sup>7</sup>. There is also an increased risk of cancer related death in geriatric women that seems to be independent of increased incidence. One possible explanation is related to stage of disease as Ovarian, Endometrial and Cervical cancers tend to be diagnosed at a more advanced stage in elderly women.<sup>3</sup>

Population aging is emerging as a pre-eminent phenomenon throughout the world. Among the aged, the women deserve special attention because they outlive men in most societies. Nevertheless, postmenopausal and geriatric gynaecological problems have not received adequate attention in India. There is an obvious need of screening programme for early detection of gynecological malignancy to provide better geriatric services, but a paucity of data regarding gynaecological morbidity in geriatric women hampers proper planning.<sup>8</sup>

Hence the present study was contemplated with view to assess the magnitude of gynaecological morbidity in the state of Himachal Pradesh to help in early diagnosis and treatment. The Geriatric care can best be summed up by the slogan of the British Geriatric society "Adding Life to Years".<sup>1</sup>

This study was conducted in the Department of Obstetrics and Gynecology at Kamla Nehru Hospital for mother and Child at IGMC, Shimla. (H.P) which is premier medical college of the state catering to both urban and rural population.

## METHODS

It was a prospective observational study done over one year period. All elderly women admitted in our institution aged 60 years and above were included in the study. Ethical clearance was obtained from the ethical committee of the institution.

Detailed history, including history related to menopause, personal history and medical history was recorded. Gynecological examination was done including Papanicolaou smear (Pap smear). Routine investigations included a complete haemogram, blood biochemistry, urine examination and pelvic ultrasonography.

Probable diagnosis of gynecological disorders was made and if any special investigations were required, they were done accordingly. Fractional curettage and cervical biopsy if indicated was taken and tissue sent for histopathological examination (HPE) in the Pathology Department of I.G.M.C Shimla. Cancers markers if required were also advised. Any other special investigations like Computed tomography scan and Magnetic resonance imaging if required were advised.

After definitive diagnosis of gynecological disorders, the treatment was started accordingly. All data collected was recorded and analyzed statistically.

## RESULTS

In our study there were 224 patients aged 60 years and above, amongst total admission of 3014 in the Gynaecology ward. The incidence of hospital admission of geriatric female patient came out to be 7.43%.

**Table 1: Age distribution of elderly women (study population) (n=224).**

Age (in years)	Number	Incidence %
60-65	117	52.23
65-70	60	26.78
70-75	33	14.73
>75	14	6.25

As shown in Table 1, 117 (52.23%) were in the age group of 60-65 years, 60 (26.78%) in the age group of 66-70 years, 33 (14.73%) in the age group of 71-75 years and 14 (6.25%) were more than 75 years.

Mean parity in the admitted patients was four. 55 patients (24.55%) out of the 224 were smokers. The average age of menopause was 45 years and 210 patients (94.15%) had natural menopause whereas 14 patients (6.25%) gave history of surgical menopause. Of these 14 patients, 11 had undergone total abdominal hysterectomy with or without salpingo oophorectomy whereas 3 patients had undergone vaginal hysterectomy.

**Table 2: Incidence of gynecological symptoms in the study subjects.**

Gynecological symptoms	No.	Incidence %
Post menopausal bleeding	92	41.07
Pain abdomen and distension	84	37.50
Something coming out of introitus	68	30.35
Discharge per vaginum	36	16.07
Urinary symptoms	16	7.14
Women with single symptom	98	43.75
Women with multiple symptoms	126	56.25

As can be seen from Table 2 the most common presenting complaint was postmenopausal bleeding in 92 patients (41.07%), followed by pain and abdominal distention in 84 patients (37.50%). 68 patients (30.35%) complained of something coming out of introitus, 36 patients (16%) reported discharge per vaginum and 16 patients (7.14%) had urinary complaints. 98 females had single complaint while 126 patients had more than one complaint.

**Table 3: Associated co morbidities in geriatric women (n-181).**

Disease	Number	Incidence%
Hypertension	132	72.92
COPD	30	16.57
Hypothyroidism	24	13.25
Diabetes Mellitus	22	12.15
Anemia	19	10.49
Coronary Artery Disease	15	8.28
Others (DVT, CKD, Liver disease)	5	2.76

181 patients had one or more comorbid conditions (Table 3). Hypertension (72.92%) was the most common followed by chronic obstructive pulmonary disease (16.57%), hypothyroidism (13.25%), diabetes mellitus (12.15%), anemia (10.49%), coronary artery disease (8.28%) and other diseases like chronic kidney disease, deep vein thrombosis and liver disease which constituted 2.76% of the cases.

**Table 4: Spectrum of gynaecological disorders in elderly women (n=224).**

Disease	No.	Overall Incidence %
Malignancies	121	54.01
Uterovaginal prolapse	68	30.35
Benign Ovarian lesion	19	8.40
Urinary incontinence	16	7.14

Malignancy was the most frequent diagnosis with 121 (54.01%) patients having malignant disease followed by uterovaginal prolapse, ovarian cyst and urinary complaints (Table 4).

**Table 5: Gynaecological cancers in geriatric women (n-121).**

Type of cancer	Number	Incidence%
Ovarian CA	58	47.93
Cervical CA	38	31.40
Endometrial CA	15	12.39
Vulval CA	8	6.61
Vaginal CA	2	1.65

Of the total malignancies (Table 5), ovarian cancer constituted 47.93% (n=58) followed by cervical cancer 31.40% (n 38) endometrial carcinoma 12.39% (n=15), vulval cancer 6.61% (n=8) and vaginal cancer 1.65% (n=2).

68 patients had uterovaginal prolapse of which 37 patients had third degree prolapse, 21 patients had second degree prolapse, 6 patients had vault prolapse post hysterectomy and 4 patients had procidentia.

Benign ovarian cyst was seen in 19 patients while 16 patients had urinary incontinence.

**Type 6: Types of surgeries performed in gynecological disorders.**

Type of surgery	Number	Incidence (%)
VH with PFR	56	25
TAH with BSO	52	23.21
Extrafascial hysterectomy	17	7.5
B/L Salpingo ooprectomy	5	2.2
Wertheim's hysterectomy	6	2.6
Sacrospinous colpopexy with cystocele repair	6	2.6
Pyometra	22	9.8
Fractional curettage	36	16
Cervical Bx	14	6.2
Hysteroscopic Bx	3	1.3
Vulvectomy with inguinal lymphadenectomy	2	0.89
Pessary	3	1.3
Burch colposuspension	2	0.89

Table 6 and Table 7 shows that in 52 patients of ovarian cancer, exploratory laparotomy proceed total abdominal hysterectomy with bilateral salpingo oophorectomy with infracolic omentectomy with surgical staging of tumour was done. Five patients were sent for neoadjuvant chemotherapy and one patient with Krukenberg tumor with cancer breast was referred to department of surgery for further management.

Six out of 38 patients diagnosed with cervical cancer underwent Wertheim's hysterectomy while two had extrafascial hysterectomy and rest reported with advanced stage disease and were referred for radiation therapy. Extrafascial hysterectomy with pelvic

lymphadectomy was done in all 15 patients of endometrial carcinoma.

**Table 7: Treatment modalities in different type of malignancies.**

Type of malignancy n-121	Treatment given	No. of patients
Ovarian cancer, n-58	TAH with BSO with Infracolic omentectomy	52
	Neo adjuvant chemotherapy	5
Cervical cancer, n-38	Werthiems hysterectomy	6
	Extrafascial hysterectomy	2
	Radiation	30
Endometrial cancer, n-15	Extrafascial hysterectomy with pelvic lymphadenectomy	15
Vulval cancer n-8	Vulvectomy with inguinal lymphadenectomy	2

In 56 cases of pelvic organ prolapse, vaginal hysterectomy with pelvic floor repair was done whereas in 6 cases of vault prolapse sacrospinous colpopexy with cystocele repair was done and three patients had pessary insertion. 36 patients had fractional curettage which was combined with cervical biopsy in 14 patients for postmenopausal bleeding. Drainage of pyometra was done in 22 cases and hysteroscopic guided endometrial biopsy was done in 3 patients. Simple vulvectomy with inguinal lymphadenectomy and Burch colposuspension was done in two patients each.

## DISCUSSION

In our study the commonest age group in patients who were admitted for gynecological complaint was between 60-65 year and it was 52.23%. This is consistent with the study done by Dey et al in which 45.56% of the patients admitted in ward above 60 years were in the age group of 60-65 years.<sup>4</sup> The average age of menopause was 45 years which is also consistent with Pan Indian study done by Ahuja M who reported average age of menopause in northern India to be 45+3 years.<sup>9</sup> The natural menopausal age of a woman serves as a biomarker for subsequent disease prediction and mortality.<sup>10</sup> Epidemiological studies have identified that age adjusted mortality is reduced by 2% while the risk of uterine/ovarian cancer increases by 5% with each increasing year of age at menopause.<sup>11</sup>

In 6.2% of patients menopause was secondary to hysterectomy which is much lower than that reported by MerrillRM12 which was as high as 33% by the age of 55 years in some of the American states. In our study the most common presenting complaint was postmenopausal bleeding (41.07%) and the commonest diagnosis was genital malignancy (54.01%) followed by uterovaginal

prolapse (30.35%). The risk of developing a gynecological cancer is highest in elderly women.<sup>7</sup> In present study the incidence of genital malignancy was much higher than that reported by other Indian studies.<sup>2,4,8</sup>

Among the gynaecological malignancies (121 patients), ovarian carcinoma was the most common (47.93%) followed by cervical carcinoma (31.40%). This is consistent with the trend increasingly reported from India in which ovarian and corpus uteri malignancies are on the rise in the past two decades.<sup>13</sup> Cancer cervix is the second commonest malignancy seen in females after cancer Breast in India.<sup>14-16</sup>

In present study incidence of cervical cancer seems to be less. This may be because the incidence of invasive cervical cancer is lower in women aged 65 and over, but mortality is higher, largely because stage at the time of diagnosis is more advanced.<sup>17</sup>

A review of cancer deaths in women in Australia aged 50 and above found that 70% could have been avoided by appropriate screening. In the women aged 50 to 74, 67% had never been screened, and none of those aged 75 and over had had a Papsmear.<sup>18</sup> This has been corroborated by studies in United States that because of decreased medical office visits there is late stage diagnosis of cancer cervix in the elderly.<sup>19</sup>

Pelvic organ prolapse is a major cause of hospital admissions and surgery in geriatric women. In our study 30.35% of elderly patients had Pelvic organ prolapse. The incidence of pelvic organ prolapse is lower in current study than that seen in the study done by Dey et al who reported an incidence of 51.1%.<sup>4</sup> Similarly in a study done by Swift et al in older patients receiving routine gynecologic care, the incidence of pelvic organ prolapse reported was much higher as compared to our study.<sup>20</sup>

In this study 50% to 60% were found to have stage II POP; stage III prolapse was present in 9% of the women aged 60 to 69 and 21% of the women aged 70 and over. Age was found to be an independent risk factor for symptomatic pelvic floor dysfunction (including POP) in a large Australian household survey.<sup>21</sup> Other risk factors that have been identified are parity, body mass index, chronic lung disease and coughing.<sup>21-23</sup> This was consistent with findings in our study where apart from advanced age and high parity (commonest parity being 4 and above), high prevalence of smoking (24.54%) was seen in geriatric age group.

Out of 68 admitted patients with pelvic organ prolapse, 62 patients had definitive surgery including vaginal hysterectomy with pelvic floor repair, repair of cystocele, enterocele and sacrospinous colpopexy. 6 patients had conservative management including pessary insertion for 3 patients. 89.65% (n 52) of patients with ovarian cancer had total abdominal hysterectomy with salpingo-

oophorectomy with infracolic omentectomy with surgical staging of tumor, five patients were sent for neoadjuvant chemotherapy and one patient with Krukenberg tumor with cancer breast was referred to deptt of surgery for further management. All cancer endometrium patients had extrafascial hysterectomy with pelvic lymphadenectomy for. But only eight out of 38 cancer cervix patients could be operated because of advanced stage of disease which is consistent with the fact that cervical cancer is seen in advanced stages in elderly patients.<sup>17</sup> Wertheims hysterectomy was done in 6 patients and extrafascial hysterectomy in 2 patients with cancer cervix. Rest of the patients received radiation. This is consistent with the study done by Ying Gao et al where radiotherapy was the most frequent treatment given to geriatric patients in cancer cervix.<sup>24</sup> Two patients of stress urinary incontinence were treated surgically with Burch Colposuspension whereas rest were managed conservatively.

## CONCLUSION

Pelvic organ prolapse and genital malignancy are the major gynaecological causes of hospital admissions in the patients above 60 years. Post menopausal bleeding is the commonest complaint. Ovarian and endometrial cancer are showing a rising trend in this age group. Though cervical cancer was the second most common malignancy in this group, most of these patients presented at advanced stage and hence were inoperable. Therefore, recommendations to discontinue screening in older age groups must be viewed with caution. Reluctance to undergo pelvic examination in this group must be sensitively addressed so that increased morbidity due to delay in diagnosis is avoided. With 80.80% of these patients having comorbidities, these patients are at high risk for surgery. Therefore, there should be separate operation theater units to handle this fragile subset of population.

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