

Short

Communication

Age and causes of cancer and non-cancer hysterectomy amongst Hindu and Muslim patients

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Abstract

Background: Hysterectomy is the second most common surgical procedure in women other than cesarean delivery but there is relatively little information about its causes in relation to religions.

Objective: To find out the causes of hysterectomy in relation to age and parity amongst Hindu and Muslim patients

Methods: 1000 records of the patients, who underwent cancer hysterectomy due to cervical cancer or non-cancer hysterectomy for benign conditions of the uterus in past years of their life, were analyzed. All patients were from the same hospital and recently visited the hospital for follow-up checkup through Pap smear. Chi square test was employed to test the association.

Results: Amongst 1000 hysterectomies 570 (57%) were for carcinoma cervix and 430 (43%) for benign conditions of uterus. 485 (85%) cancer cases were Hindu and 85 (15%) were Muslim, however 310 (72%) cases of benign uterine conditions were Hindu in comparison to 120 (28%) Muslim. Majority of hysterectomy cases of both the religions belonged to age group of 41-50 yrs., however, the association between the age groups and benign uterine conditions (Uterine fibroids Vs. Others) was observed highly significant in Hindu patients only.

Conclusion: The study revealed that fifth decade (41-50 yrs) of life of women was found prevalent for hysterectomy in both the religions, however carcinoma cervix was more common in Hindu patients. Prolapse uterus and Pelvic Inflammatory disease were comparable high for non-cancer hysterectomy in Muslim patients.

Key Words: Hysterectomy, cervical cancer, benign uterine conditions, religion.

Introduction:

The hysterectomy is the most commonly performed major gynecological surgical procedure amongst women other than cesarean section delivery and it has been advocated in women for a variety of indicators¹⁻³. The benign indications i.e. uterine fibroids, excessive bleeding, prolapsed uterus, endometriosis, Pelvic Inflammatory disease, ulcer or nodule over the cervix etc account for over 90% hysterectomies and 10% account for either as a consequence of abnormal cervical cytology or cervical or other gynecological cancer⁴. The rate of hysterectomy is very low (4-6%) in India in comparison to higher frequency of hysterectomy (10-20%) in other countries^{5,6}. It is also evident from the literature that cervical cancer hits more Hindu women than Muslim. Despite the presence of risk factors of high parity, early age of marriage and early childbirth after marriage, absence of cervical dysplasia and malignancy emphasizes the fact that socio-cultural factors like absence of promiscuity and male circumcision, play an important role in low prevalence

of cancer cervix⁷⁻⁹. The study was aimed to find out the causes of hysterectomies in relation to age and parity amongst Hindu and Muslim patients.

Methods:

The four years records from 2007 to 2011 of the patients, who underwent hysterectomy in the past years of their life and recently visited the hospital for follow up Pap smear, were randomly selected, reviewed and analyzed as per the causes of hysterectomy. All the patients aged 21 to 70 yrs. were from the same hospital. A total of 1000 records were found satisfactory for the analysis related to age, causes of hysterectomy, parity and religion i.e. Hindu or Muslim. The population of the hospital was Hindu dominated followed by Muslim. There were very few patients of Christian and Sikh religion, so were not included in this study. Amongst 1000 hysterectomies 570 (57%) were cancer hysterectomies for carcinoma cervix and 430 (43%) were non-cancer hysterectomies for benign uterine conditions i.e. uterine fibroids, prolapsed uterus, Dysfunctional uterine bleeding, Pelvic inflammatory disease and sometimes

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cyst also. All cancer and non-cancer hysterectomies were categorized in different age groups (10 yrs interval of age) of patients as per their religion i.e. Hindu or Muslim. Stratification was done between the two age groups ≤ 40 yrs and > 40 yrs) as well as for two parity groups (≤ 3 & > 3) with the religion. Similarly for non-cancer hysterectomies stratification was done between two groups i.e. fibroids versus other benign conditions along with parity, age and religion.

Statistical analysis

The data were entered into Microsoft Excel spreadsheet and analyzed using the statistical software Epi-Info version 6.0. The data were used to calculate frequencies and proportions. Chi square test was used to indicate the difference in proportions. P value < 0.05 was considered as significant. Descriptive statistics was described as mean (\pm SD).

Results:

The mean age of the patients underwent hysterectomy was 44.4 (± 9.29) years in Hindu and 42.7 (± 9.12) in Muslim, for cancer hysterectomy 46.1 (± 9.5) years in Hindu and 45.2 (± 9.3) in Muslim and for non-cancer hysterectomy was 41.7 (± 8.33) years in Hindu and 41 (± 8.6) in Muslim. The fifth decade of life was found prevalent in 459/1000 (45.9%) for cancer as well as non-cancer hysterectomy amongst both the religions Table-1. Early stage of carcinoma cervix was main cause for hysterectomy in 570 cases (485(85%) Hindu and 85(15%) Muslim), and Benign uterine conditions(BUD) were in 430 patients (310 (72%) Hindu and 120(28%) Muslim). A statistical significant association was observed between age and religion of cancer patients ($P=0.04$) and for patients of BUD($P=0.03$). Fibroids are non-cancerous, muscular tumors that grow in the wall of the uterus and was main benign uterine condition for hysterectomy in both the religions. Non-cancer hysterectomies were done for uterine fibroids in 254 patients (173 (68.1%) Hindu and 81(31.8%) Muslim. Dysfunctional Uterine Bleeding is also a major cause of hysterectomy. Dysfunctional Uterine bleeding (DUB), other than menorrhagia, is not related to any specific underlying condition and was observed in 83 patients constituting 69(83.1%) Hindu and 14 (16.8%) Muslim. Prolapse uterus means when the uterus slips from its usual place down into the vagina and leads to urinary and bowel problems and pelvic pressure. Hysterectomy is being done if other treatment fails and it was the cause of non-cancer hysterectomy in 80 patients (59 (73.7%) Hindu and 21(26.2%) Muslim. Pelvic

Inflammatory disease (PID) occurs when bacteria moves from the vagina or cervix into the uterus, fallopian tubes, ovaries or pelvis which can cause permanent damage to the reproductive organs and depending on the damage of organ involved at times a hysterectomy may be required and it was the cause in 13 (9 (69.2%) Hindu and 4(30.7%) in Muslim patients. The association between the age and benign uterine conditions (Uterine fibroids Vs. Others) was observed highly significant ($P=0.006$) in Hindu patients in comparison to non-significant association in Muslim patients ($P=0.85$). Amongst cancer patients who aged > 40 yrs and had ≤ 3 parity, 213(93%) were Hindu in comparison to 16 (6.9%) Muslim and found highly significant ($P=0.008$) when compared to same age patients (non-significant $P=0.24$). These findings indicate that age (> 40 yrs) is significantly linked with the higher rate of cervical cancer amongst Hindu patients while amongst Muslim patients multiparity at young age (≤ 40 yrs.) of women could be a risk factor for cervical cancer. Non-cancer hysterectomy was frequent in 120 (86.3%) Hindu patients aged 40 yrs had ≤ 3 parity in comparison to 19 (13.6%) Muslim. There is significant association between age and religion of patients had ≤ 3 parity, ($P=0.002$) However there is no significant association($P=0.54$) between age and religion of patients had > 3 parity and these results did not confirm that multiparity is a risk indicator for non-cancer hysterectomy..

Table-1 Age wise percentage of causes of cancer and non-cancer hysterectomies amongst Hindu and Muslim patients

Age groups (yrs.)	Cancer hysterectomies		Non-cancer hysterectomies								Total
	Cancer cervix		Fibroid uterus		DUB		Prolapse uterus		PID		
	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	Hindu	Muslim	
21-30	25 (5.1)	8 (9.4)	11 (6.3)	8 (9.8)	7 (10.1)	4 (28.5)	8 (13.5)	1 (4.7)	2 (22.2)	1 (25)	75
31-40	65 (12.9)	16 (18.8)	40 (23.1)	30 (37)	24 (34.7)	4 (28.5)	14 (23.7)	8 (38)	6 (66.6)	1 (25)	208
41-50	230 (47.4)	27 (31.7)	93 (53.7)	36 (44.4)	35 (50.7)	6 (42.8)	20 (33.8)	10 (47.6)	0	2 (50)	459
51-60	122 (25.1)	22 (25.8)	24 (13.8)	6 (7.4)	3 (4.3)	0	15 (25.4)	2 (9.5)	1 (11.1)	0	195
61-70	43 (8.8)	12 (14.1)	5 (2.8)	1 (1.2)	0	0	2 (3.3)	0	0	0	63
Total	485	85	173	81	69	14	59	21	9	4	1000

Discussion:

In Indian population Hindu constitutes the majority of the Indian population and Muslim constitutes an underprivileged minority in India. Hysterectomy, the surgical removal of uterus, has been reported as the most common non-pregnancy related surgical procedure among women performed by gynaecologists and is the definite cure for many of its indications which include, fibroids, dysfunctional uterine bleeding, uterovaginal prolapse, endometriosis and adenomyosis, pelvic inflammatory disease, pelvic pain, gynaecological cancers and obstetric complications³. Prevalence of hysterectomy also differ amongst rural and urban women in India^{10,11}. It is evident from the literature that Muslim women are known to have lower incidence of cervical cancer and Human papillomavirus (HPV) infection^{7,8}, which is also revealed from the present findings that out of 570 cancer hysterectomies 485(85%) belonged to Hindu patients in comparison to only 85/ 570 (15%) Muslim. which showed six times higher chances of cancer hysterectomy in Hindu as compared

to Muslim, a significant association between age and religion, as also reported by Singh & Kaur⁵. The reason for lower rate of cancer could be circumcision among Muslim men which has a protective effect against sexual transmission of human papilloma virus, a causative agent in cervical cancer⁷. Early age of first intercourse is associated with greater susceptibility to HPV infection possibly due to immature status of cervix and other high risk factor for HPV infection is multipartner relationship. However it is also reported that Indian Muslim women are equally susceptible to HPV16/18 infection and for development of abnormal cervical cytology but there is paucity of data for comparison⁹.

The results of this study indicates that there are three to four times higher chances of non-cancer hysterectomy in 310/430 (72%) Hindu patients as compared to 120/430 (28%) Muslim and this association was found statistically significant. However there is higher rate of non-cancer hysterectomy for uterine

fibroids in 38/57 (66.6%) Muslim patients in comparison to 51/112 (45.5%) Hindu on the other side rate of hysterectomy for other benign conditions of uterus i.e. prolapsed uterus, Dysfunctional uterine bleeding and Pelvic Inflammatory disease was observed higher in 61/112 (54.4%) Hindu patients in comparison to 19/57 (33.3%) Muslim. The association between age of patients (≤ 40 & > 40 yrs) with benign uterine conditions (fibroids Vs. others) was statistically highly significant in Hindu patients only, and of no significance in Muslim. Parity wise most of cancer hysterectomy was found associated with woman aged > 40 yrs, and had ≤ 3 parity as per their religion while there is no significant association in the same age group of patients had > 3 parity which showed that sometimes multiparity could be a risk indicator for cancer hysterectomy while it is evident from the report of Jayant¹² that early age at first coitus and poor penile hygiene are two additive major risk factors for carcinoma cervix in Muslim 'bidi' smoker women. Similar association between age and religion was found significant in patients had ≤ 3 parity versus > 3 parity for non-cancer hysterectomy. Hysterectomy is the definite cure for many of its indications; however certain lower genital tract infections can occur post hysterectomy¹³. The study showed that there is an early trend of hysterectomy in woman's life and number of parity has not much significance with hysterectomy in both religions.

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