

**Original article**

**Evaluation of total abdominal hysterectomy over the decade in Holy Family Red Crescent Medical College Hospital - A retrospective observational study**

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**Abstract**

*Hysterectomy is the commonest major surgical procedure in Gynaecology & usually performed to improve quality of life rather than to cure life-threatening conditions. The rates differ between countries depending on differences in morbidity, health economical aspects, traditions and attitudes. This retrospective observational study was carried out from 2001-2010 & included all cases of abdominal hysterectomy done for benign and non emergency conditions in the department of Obstetrics & Gynaecology, Holy Family Red Crescent Medical College and Hospital, Dhaka with the intention to assess the proportion and the indications of total abdominal hysterectomy over a 10-year period. Percentage of the total abdominal hysterectomy remained between 50-70% of the total major operations over the decade. Fibroid was found to be the most common indication among the admitted patients (around 36%) with highest percentage in 2006 and 2007 (43% and 46% respectively). Next important indication was dysfunctional uterine bleeding (20%) followed by pelvic inflammatory disease (13%), ovarian mass (5%), endometriosis & adenomyosis (4%) and post menopausal bleeding (2%). The majority of hysterectomies were abdominal and the most common indication was uterine fibroids. The overall rate for hysterectomy remained reasonably stable.*

**Keywords:** Total abdominal hysterectomy, fibroid, surgery

**Introduction**

Hysterectomy is the commonest major surgical procedure in gynaecology with abdominal hysterectomy having the maximum share of 60 to 70 percent of the total.<sup>1</sup> It is the second most surgical procedure in women worldwide and almost every third women in the US have undergone hysterectomy at the age of 60.<sup>2</sup> In 2003, over 600,000 hysterectomies were performed in the United States alone, of which over 90% were performed for benign conditions.<sup>3</sup> Approximately 100,000 hysterectomy are performed in the UK each year.<sup>4</sup>

In 1853 Ellis Burnham from Lowell, Massachusetts achieved the first successful abdominal hysterectomy.<sup>5</sup> Initially mortality from hysterectomy was as high as 100% which was due to the absence of antiseptics, blood banking, modern anesthesia and the attainment of standardized methodologies. But gradually the technical evolution of abdominal hysterectomy underwent a number of stages.<sup>6,7</sup>

In general, hysterectomies are performed to improve quality of life rather than to cure life-threatening conditions. The most common indications are heavy or irregular uterine bleeding, pelvic pain and pelvic pressure. These symptoms are often associated with uterine leiomyomas, endometriosis & adenomyosis. However, the same symptoms also occur in the absence of identifiable disease which often has no pathological findings.<sup>8</sup>

The rate of hysterectomy differs not only between countries, but also within countries, depending on differences in morbidity, health economical aspects, traditions and attitudes<sup>9,10</sup> The difference ranges from 5.4 per 1000 women in the USA to 3.7 per 1000 in Italy and 1.2 per 1000 in Norway. The hysterectomy rate in developing countries is lower. Almost 20% of women in these countries will have a hysterectomy by the age of 55 years.<sup>11</sup>

The types of hysterectomy include abdominal hysterectomy, hysterectomy with salpingo-oophorectomy, radical hysterectomy, supracervical hysterectomy, vaginal hysterectomy, laparoscope-assisted vaginal hysterectomy

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or robot-assisted laparoscopic hysterectomy.<sup>12</sup> The choice of surgical approach depends upon clinical circumstances, surgeon's technical expertise and patient preference.<sup>13</sup>

The success of the operation may be limited by side effects, variations in patient compliance and the need for long-term therapy. Medications control but do not cure the problem.<sup>14</sup>

The improved hospital care, availability of blood transfusion, advanced anaesthesia and advancement of antibiotics has opened up a new era and thereby broadened the indications for hysterectomy with minimum post operative morbidity and mortality. In our country, hysterectomies are performed for more or less similar indications as those in advanced countries with the only difference being in the preoperative evaluation of the cases which is more on the clinical ground rather than modern investigations because of limited facilities and economical constraint.<sup>15</sup> This study was carried out to assess the proportion and the indications of total abdominal hysterectomy over a 10-year period.

#### Methods

This retrospective observational study was carried out in Holy Family Red Crescent Medical College Hospital on all the cases of abdominal hysterectomy done over the decade. Data of all the admitted patients from 2001-2010 were collected from the yearly statistical record book produced annually by the departments and the hospital. These included total number of indoor admissions, total

number of patients admitted for gynaecological complaints, total numbers of major operations and total number of abdominal hysterectomies. Indications and other demographic data were noted. Patients with benign gynaecological problems who underwent abdominal hysterectomy were included and abdominal hysterectomy for emergency conditions e.g. obstetric haemorrhage and with malignant conditions were excluded.

The data were compared between 2001 and 2010. Age specific indications were analyzed in the year of 2010. P value was calculated from the Tables. Then Z Test was done for statistical analysis using SPSS version.<sup>17</sup> Significance level was set at  $p < 0.05$ . Study protocol was approved by institutional ethical committee.

#### Results

The total admitted patients over the period of 10 years through 2001-2010 was 33321. Out of which, total number of patients admitted for gynaecological complaints were 12433. Number of major operations done was 4768. Total abdominal hysterectomy done was 3167.

Rates of hysterectomy have not changed significantly over the years from 2001-2010. Overall percentage of hysterectomy remained between 50-70% of the total major operations. Rates for hysterectomy in 2001 were 57% and increased slightly to 67% by the year 2010. Among these hysterectomies, fibroid uterus was the most common (46%) indication. (Table-I)

**Table I:** Cumulative data over the period of 10 years in obstetrics & gynaecology department of Holy Family Red Crescent Medical College Hospital (2001-2010)

Variables	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Total Admission	3269	3172	3302	3351	3370	3188	3515	3353	3417	3384	33321
Admitted Gynae Patients	867	1116	1047	967	1053	987	1264	1789	1867	1476	12433
Total operations	823	1043	982	888	997	933	1005	972	1183	970	9796
Major Operations	344	420	449	313	424	464	515	613	610	616	4768
Abdominal Hysterectomy	197	291	320	201	302	329	357	361	417	401	3176
Percentage of Abdominal Hysterectomy	57%	69%	71%	64%	71%	71%	69%	59%	68%	65%	67%

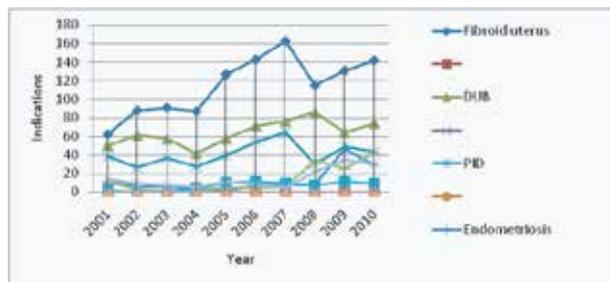
Considering the age specific indications of hysterectomies in the year 2010, most of the abdominal hysterectomies were due to fibroid uterus & done during 3rd and 4th decade. It was followed by DUB, PID and adenomyosis, all of which were among the 41-50 yr age group. Hysterectomies due to PID were done mostly

in 3rd decade. Hysterectomies done for endometriosis were more during 4th decade. Hysterectomies for chronic cervicitis were between 6-13% & for post menopausal bleeding and cervical dysplasia were between 0-5 % only. Same patient might have more than one indications. (table-II)

**Table-II:** Age distribution of patients undergoing hysterectomy in the year 2010. ( n =401 )

Age in years	Fibroid uterus	DUB	PID	Adenomyosis	Ovarian tumour	Endometriosis
31 -40	46	15	23	11	5	1
41 -50	80	32	16	16	6	4
51 -60	3	11	1	0	1	0
>60	0	3	0	0	3	0

The highest proportion of hysterectomy was done due to fibroid uterus (around 36%). It was highest in 2007 (46%). Next was due to dysfunctional bleeding, which was highest in 2001(25%). Operations due to PID, adenomyosis and endometriosis increased slightly towards the end of the decade. (Figure-1)



**Figure-1:** Hysterectomies from 2001 to 2010

Considering the post-operative complications calculated among 717 patients, urinary infection (12%) was the most followed by abdominal pain (9%), fever and wound infection (7& 6% respectively). Often the same patient developed more than one complications. (Table - III)

**Table III:** Post operative complications (n=717)

Complications	Number of Patients	%
Fever	129	7
Wound Infections	110	6
Urinary tract infection	221	12
Respiratory tract infection	37	2
Abdominal pain	166	9
Vault granuloma	19	1
Secondary haemorrhage	37	2

**Discussion**

Hysterectomy is recommended unless a uterine-sparing desire is expressed and accounts for 10% of the global rate of surgery.<sup>16</sup> Laparotomy continues to be the preferred method for hysterectomy in approximately 60–70% of the cases.<sup>15</sup>

The data found in our study was comparable to the study done in other places. We found the proportion of abdominal hysterectomy done for fibroid was 36%, for DUB was 20%, for endometriosis was 4%. Study done in Faisalabad, Pakistan showed that hysterectomy for DUB accounting for 43.3%, for fibroid 26.7% and for endometriosis 1.7%.<sup>4</sup> The slight variation could be due to the basis of clinical diagnosis. Similarly in Nigeria, total abdominal hysterectomy accounted for 18.2% of all major gynaecological operations. The most common indications were uterine fibroid (60.6%). Majority of the women were in their fifth decade of life (65.9%).<sup>17</sup> In our study it was found that 50-70% of major operations were abdominal hysterectomy & most common indication was fibroid (36%).

Another study showed abdominal hysterectomy done for uterine myomas were 54.6% and for benign ovarian tumors were 5.46% which is comparable to our study. A total of 74.77% of the patients subjected to abdominal hysterectomy were aged 36 to 55.<sup>18</sup>

A study done in our country by Ishrat S showed that common indications were fibroid (28%) & DUB 21%.<sup>19</sup> Study done by Timothy L showed the indications as fibroid 53%, adenomyosis 18% and ovarian tumour 16%.<sup>20</sup> Similar incidence was also seen in the studies by Gupta.<sup>21</sup> Study done by Shergill in India showed that the commonest indication was fibroid and DUB (26%).<sup>22</sup>

Hysterectomy due to post menopausal bleeding and cervical dysplasia was found to be between 0-5% in our study where as it was 1.2% in US community hospitals.<sup>23</sup> Same study showed hysterectomies done for other reasons were 6.4% where as in our study it was 7-9% for other reasons e.g. chronic cervicitis.

The cumulative proportion of complications in our study was 39%, out of which, fever with or without wound infection, urinary and respiratory tract infection was 27%. Study done by others showed the complication rate in hysterectomies was 24.21% out of which fever was 25.98%.<sup>18</sup> In our study it was evident the proportion of urinary tract and wound infection were 12% and 6% respectively. Study done in district general hospitals in Shire counties, two in outer London and one in London teaching hospital showed that urinary infections (25%) and wound infections (25%) were the commonest complications.<sup>24</sup> A study in united states showed 6% to 25% of abdominal hysterectomies developed an infection post surgery.<sup>25</sup>

The majority of hysterectomies were abdominal and most common indication was uterine fibroid. The overall rate of hysterectomy remained reasonably stable. The study was done in a single hospital. A multi centre analysis would have been more accurate. Some post operative data could not be collected due to drop out of patients.

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