

Surgical Complications of Abdominal Hysterectomy-One Year Study at Navodaya Medical College, Raichur.

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Abstract:

Background: Hysterectomy is one of the most common gynaecological surgery performed. The choice of approach should be based on surgical indication, patient's anatomic condition, surgeon's expertise and training

Aims and Objectives: This study is to focus on the most common indication for abdominal hysterectomy and surgical complications by studying clinical, intra operative , post operative and sonological outcomes in abdominal hysterectomy.

Material and Methods: A prospective cohort study conducted from november 2017 to october 2018 at NMCH & RC, Raichur, including 100 cases of abdominal hysterectomies done for various indications and their surgical complications.

Results: There were 8 cases of intra-operative bladder injury among 100 cases of abdominal hysterectomy . Postoperative complications-6 women had dysuria and two had hematuria ,ten women had fever and 4 women had vault collections as detected by USG. There was statistically significant drop in Hb but not PCV after surgery with mean drop of Hb by 0.25gm/ dl and PCV by -0.08% from pre-op levels.

Conclusion: Abdominal hysterectomy was done after medical management failed for various indications like fibroid,AUB, PID,endometrial hyperplasia and adenomyosis in which uterine fibroid is the most common indication of our study.

Keywords: abdominal hysterectomy ,inta-operative ,post-operative ,fibroid uterus ,AUB ,PID ,endometrial hyperplasia , adenomyosis

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I. Introduction

Hysterectomy is a common gynaecological surgery in which the uterus is completely removed (total hysterectomy) , partially removed preserving the cervix (sub-total hysterectomy), or is removed with the tubes and ovaries (total hysterectomy with bilateral salpingo-oophorectomy) the four approaches to hysterectomy¹ for benign disease are abdominal hysterectomy ,vaginal hysterectomy , laparoscopic hysterectomy and robotic-assisted hysterectomy² and radical hysterectomy done for malignancies.

Hysterectomy is usually performed for problems including uterine fibroids, endometriosis, adenomyosis, utero vaginal prolapse , abnormal menstrual bleeding, and cancer^{3,4}.

Benign conditions such as uterine fibroids, abnormal uterine bleeding, and endometriosis account for 85–90% of hysterectomies, with the remainder performed to prevent, or treat cancer.⁵

Hysterectomy is the second most common surgery done in women, next only to caesarean section⁶

The incidence of hysterectomy varies from place to place depending upon the clinical and clinician factors⁷.

Most common histopathological diagnoses reported in hysterectomy specimens done by various routes are leiomyoma, adenomyosis and endometrial hyperplasia.⁸

The incidence of leiomyoma is about 20% in reproductive age group and increases with age⁹

Clarke-Pearson et al¹⁰ in their study categorized the most common complications of hysterectomy as infectious, venous thromboembolic, genitourinary (including ureter and bladder injury) and gastrointestinal (intestinal and rectal injury) tract injury, bleeding, nerve injury, and vaginal cuff dehiscence. Infectious complications after hysterectomy range from 10.5% for abdominal hysterectomy. ACOG also acknowledges that the choice of approach should be based on the surgical indication, the patient's anatomic condition, and data supporting the approach, informed patient preference, and the surgeon's expertise and training.

II. Materials And Methods

SOURCE OF DATA:

All patients admitted for abdominal hysterectomy meeting the inclusion and exclusion criteria during November 2017 to November 2018 in Navodaya medical college hospital and research center, Raichur.

STUDY DESIGN:

Prospective study.

Inclusion criteria:

- a) Fibroid uterus
- b) Abnormal uterine bleeding
- c) Chronic cervicitis
- d) Adenomyosis.
- e) Endometriosis
- f) Pelvic inflammatory disease
- g) Adnexal disease
- h) Ovarian cyst

Exclusion criteria:

- a) genital malignancy
- b) bleeding diathesis
- c) prolapse

Methods of collection of data –

Written informed consent was taken from patient for pre-operative evaluation, surgical procedure, post operative evaluation and willingness to participate in study. Approved proformas were used for collecting demographic data, clinical data, preoperative evaluation, intra-operative observations, post-operative complications, sonographic findings.

Ethical committee clearance was taken from the institute.

Pre- operative evaluation:

Informed written consent and History noted

Clinical examination : - General examination
per abdomen examination
pelvic examination

Investigations: Haemoglobin, total leucocyte count, differential count, platelet count, blood group and Rh typing, RFT, HBSAg, HIV, LFT, Thyroid profile, Serum electrolytes, BT, CT, Chest X-ray and ECG.,

Screening of PAP smear done.

Endometrial biopsy if indicated

Pre anesthetic evaluation for fitness.

Operative intervention:

Patients were subjected to either abdominal hysterectomy. The steps of surgery, pre and post operative care were as per Institution's standard protocols as described below. After a proper preoperative evaluation with clinical and laboratory investigations and after getting informed consent, patients were selected for the study and were studied. Before surgery patients were prepared. All patients were given prophylactic antibiotics in the form of injection Cefotaxim 1 gm i.v. just before surgery. All cases were done under either spinal or epidural anaesthesia

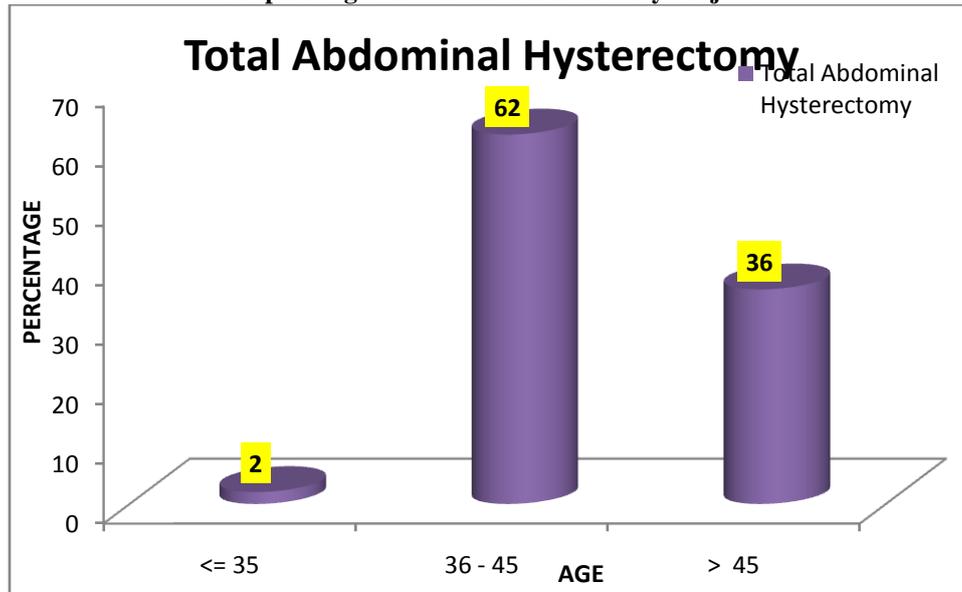
Data collection and Statistical analysis:

Statistical analysis of the data was done using **Chi-squared test which** was used for finding differences with data.

III. Results

1.Age of the subjects

Graph 1: age wise distribution of study subjects



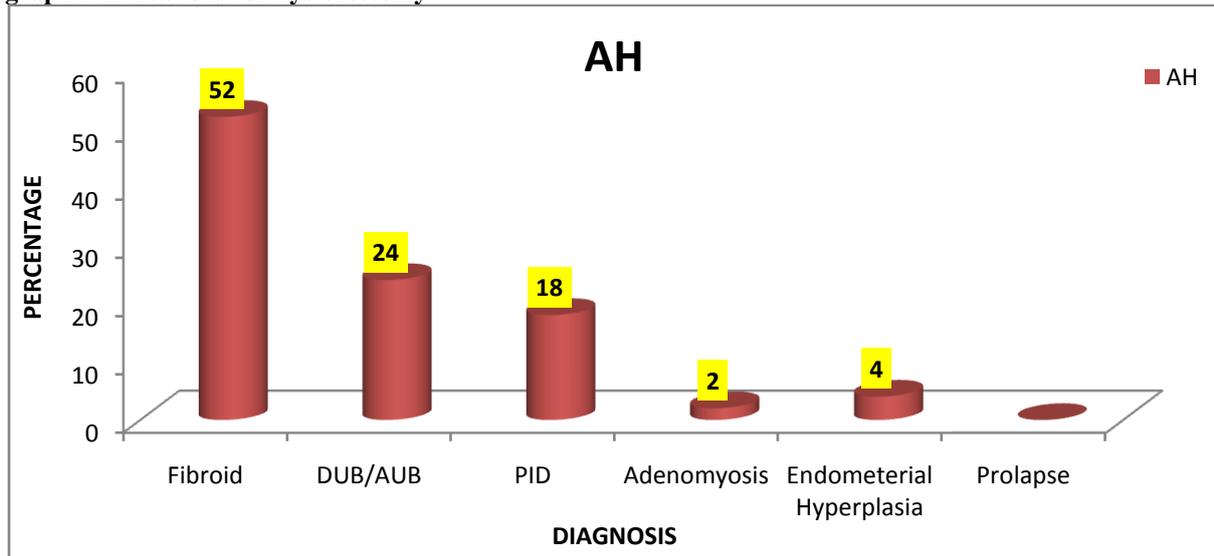
2. Parity of subjects

Table 1: Parity wise distribution of study subjects

PARITY	TYPE OF SURGERY	N	MEAN	Std. deviation	Std. error mean
	TAH	100	2.96	1.17734	0.1665

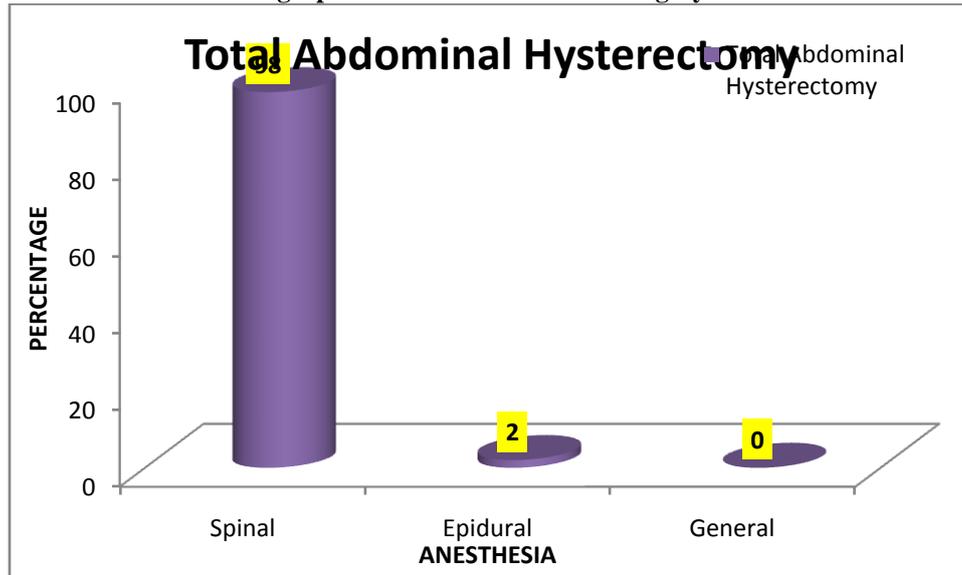
3.Indications for abdominal hysterectomy

graph 2:indications for hysterectomy



4.Anaesthesia used for surgery:

graph 3: anaesthesia used for surgery



5.PREOPERATIVE HB AND PCV:

table 2:preoperative HB and PCV

pre operative	type of surgery	N	mean	std deviation	std error mean
Hb	Total abdominal hysterectomy	100	11.174	1.375	0.194
PCV	Total abdominal hysterectomy	100	31.48	3.575	0.505

table 3:post operative HB and PCV:

	TYPE OF SURGERY	N	Mean	Std. Deviation	Std. Error Mean
POST OP HB	Total Abdominal Hysterectomy	100	10.924	1.239	0.175
POST OP PCV	Total Abdominal Hysterectomy	100	31.56	3.176	0.449

table 4:mean pain score comparison after TAH

PAIN SCORE AT	MEAN PAIN SCORE +_2 SD
12 HOURS	5.62 +/-0.78
24 HOURS	4.26 +/- 0.94
48 HOURS	3.62 +/- 0.92
72 HOURS	3.02 /- 1.05

8.NUMBER OF BLOOD TRANSFUSIONS REQUIRED AFTER TAH:

TABLE 5:NUMBER OF BLOOD TRANSFUSIONS AFTER TAH.

BLOOD TRANSFUSION	TAH	NO(%)	TOTAL
0	40	40%	40
1	40	40%	40
2	20	20%	20
3	0	0	0
TOTAL	100	100%	100

8. POST-OPERATIVE URINARY AND BOWEL COMPLICATIONS AND POST-OPERATIVE FEVER.

Six women among 100 Abdominal hysterectomy cases had dysuria post-operatively and two had hematuria. None of the women in had any bowel complaints or complications post-operatively. Ten women among 100 Abdominal hysterectomy operated cases had fever.

9. Post operative USG findings

Table 6: POST OPERATIVE USG FINDINGS IN 100 TAH CASES

Postop usg findings	N
Vault collection	8
Normal	92

Mean age in TAH operated cases is 41.38 +/- 7.1 years (Mean +/- 2SD). When age group wise distribution of study subjects were analysed more number of patients belonged to age group 36-45 years as depicted in graph 1.

The most common indication for abdominal hysterectomy was fibroids (52%) in 100 cases operated followed by AUB (24%) and followed by PID (18%) and endometrial hyperplasia (4%) and adenomyosis (2%) as depicted in graph 2. 98 cases of TAH were operated under spinal anaesthesia and 2 under epidural and none under general anaesthesia as depicted in graph 3.

The mean parity in 100 TAH operated cases is 2.96 +/- 1.17 (Mean +/- 2 SD), minimum parity being one as depicted in table 1.

The pre operative hb for 100 cases operated for TAH is 11.174 +/- 1.375 gm/dl and pcv 31.48 +/- 3.57 % (Mean +/- 2 SD) as depicted in the table 2.

For 100 cases of TAH operated, there was statistically significant drop in HB but not the PCV after surgery with mean drop of HB by 0.25 gm/dl and PCV by -0.08% from pre-operative levels as depicted in table 3.

Mean pain score after TAH at 12 hrs, 24 hrs, 48 hrs and 72 hrs was 5.62, 4.26, 3.62 and 3.02 respectively as depicted in table 4.

40 patients required no blood transfusion after TAH and 40 patients needed 1 blood transfusion and 20 patients were transfused with 2 and none with 3 as depicted in the table 5.

8 women among 100 operated cases of TAH had vault collections as detected by USG as depicted in table 6.

Six women among 100 Abdominal hysterectomy cases had dysuria post-operatively and two had hematuria.

None of the women in had any bowel complaints or complications post-operatively.

Ten women among 100 Abdominal hysterectomy operated cases had fever.

IV. Discussion

In today's health care milieu, rigid evidence based practice guidelines must be dictated by outcomes. Because there are significant differences in the medical and economic outcomes of abdominal, laparoscopic and vaginal hysterectomy, the standard of appropriate care should be applied to the choice of a surgical route in individual patients.

Proponents justify their practice styles on the basis of their greater familiarity with and preference for the abdominal route, inadequate training in vaginal and laparoscopic techniques and lack of clear guidelines for selecting appropriate candidates for the various approaches.

The indications and contraindications for each method must be examined critically in light of evidence based and outcome based results. If the medical and economic outcomes of a particular route are clearly superior, physicians have an obligation to make patients aware of the advantages so that together they can select the best possible treatment.

Good surgical practice would suggest that the indication and severity of the pathologic condition be the primary criterion for selecting the route of surgery.

But one thing to be remembered is that contraindications to VH do exist and they should be respected. There should not be any hesitation to change over to either a laparoscopic assisted or abdominal procedure in the presence of a definite contraindication at any stage. This is not a failure, rather a good judgment.

This study was a prospective study conducted at Navodaya Medical College and Hospital, Research Centre, Raichur which involved one hundred patients. In the present study it was observed that the maximum number of hysterectomies were performed between the age group of 36-45 years (62%).

Mean age group in the present study years for abdominal hysterectomy was 41.3. This is well compared with study by Susan M Taylor et al in which the mean age of surgery was 42.2 and Isik Akbay was 45.0 and Matteson was 46.3.

Our study can be well compared with Maresh et al. But adhesions complicating surgery was high (11.7%) in our study when compared with the other studies.

There was 1.7% incidence of haemorrhage in the abdominal operated cases which was higher compared to other studies.

Incidence of UTI can be well compared with Isik Akbay et al.

Incidence of wound infection in the present study was slightly high 6.7% compared with study conducted by Tariq Miskry.

Febrile morbidity occurred in 1.7% which can be well compared with study conducted by Dewan Rupali 2%

In the study by maresh et al, adhesions were present in 0.4% and in the present study 11.7% had adhesions. Bladder injury in the study by maresh et al was 0.76%, in the study by susan m taylor was 2.1% and in the present study were 6%.

In the study by isik akbay et al, 7.4% had UTI, 32.3% had fever and 3.7% had wound infections as postoperative complications. In the study by tariq miskry 5.5% had UTI, 11.1% had vault hematoma and 5.5% had wound infections post operatively and in the present study, 1.7% had hemorrhage, 3.3% had UTI, 13.3% had fever and 6.7% had wound infections post operatively.

Table 7: Comparison of mean age groups in TAH with different authors and present study.

AUTHORS	Mean age (years)
Pradeep garg ¹¹ (2003)	42.2
Isik akbay ¹² (2004)	45.0
Matteson et al (2006)	46.3
Present study	41.3

Table 8: Comparison of complications of TAH by different authors with the present study

	Maresh et al 2002	Susan m taylor 2003	Present study
Hemorrhage	2.3%	-	0
Adhesions	0.4%	-	11.7%
Bladder injury	0.76%	2.1%	6%
Bowel injury	-	1.4%	0

Table 9: Comparison of post operative complications in TAH by different authors with present study

	Hemorrhage	UTI	Vault hematoma	Fever	Wound infections
Isik akbay ¹² et al	-	7.4%	-	32.3%	3.7%
Singh abha ¹³	-	-	-	3%	1%
Tariq miskry	-	5.5%	11.1%	-	5.5%
Present study	1.7%	3.3%	8%	13.3%	6.7%

V. Conclusion

All the hysterectomy specimens, even if grossly appearing benign and normal are subjected to detailed histopathological examination to exclude malignancy.

Uterine fibroids (52%) is the most common indication for hysterectomy in our institution. The choice of approach should be based on the surgical indication, the patient's anatomic condition and data supporting the approach, informed patient preference and the surgeon's expertise and training. For an individual patient the surgeon should account for clinical factors and determine which route of hysterectomy will most safely facilitate removal of uterus and optimize patient outcomes, given the clinical situation and surgeon training and experience. Selection of the route of hysterectomy for benign causes can be influenced by the size and shape of the vagina and uterus, accessibility of the uterus (eg-pelvic adhesions), extent of extra uterine disease, the need for concurrent procedures, surgeon training and expertise, average case volume, available hospital technology, devices and support, whether the case is emergent or scheduled, and preference of the informed patient.

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