

RETROPERITONEAL DISSECTION IN BENIGN GYNAECOLOGIC SURGERY

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SUMMARY

The operative technique for dissecting the retroperitoneal space, which has been used extensively in the surgical management of malignant tumours in the pelvis has been also indicated in benign gynaecologic surgery either to ligate both hypogastric arteries to prevent intraoperative and control post-operative haemorrhage and to train residents. The results of this study determine that bilateral hypogastric artery ligation does not have any ill effect on the bladder, rectum, anus, perineum, buttocks and lower limb etc. This is perhaps because of the quick and considerable establishment of the collateral circulation. This procedure being a simple, and effective life saving measure in controlling intraoperative and post-operative pelvic haemorrhage should be advocated as an integral part of residents training programme.

INTRODUCTION

Although advocated for paraaortic dissection, pelvic node dissection and presacral neurectomy, the dissection of retroperitoneal space is little known and seldom used in the present day practice of benign gynaecologic surgery. This surgical procedure is usually undertaken

to identify and ligate hypogastric arteries to control severe spontaneous intraoperative and postoperative haemorrhage.

There are three major groups in which dissection of retroperitoneal space in benign gynaecologic surgery has been indicated, firstly to ligate internal iliac arteries, (a) to control postoperative vaginal vault haemorrhage after hysterectomy postoperative intraperitoneal haemorrhage and broad ligament haematoma

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(Hecht and Blumenthal 1954; Siegel P. and Mengert W.F. 1961; Decker 1955; Cruikshank S.H. 1986; Towmbly, 1973) (b) to control intraoperative haemorrhage when the haemostasis would be attained more rapidly with less chance of ureteral ligation than by multiple ligation in area distorted by the disease or previous surgery and (c) as prophylactic to prevent haemorrhage in surgery for pelvic inflammatory disease, endometriosis and leiomyoma. Secondary it has been used to explore broad ligament portion of ureter and for the uterine deligation during and after hysterectomy. Lastly, it is used to avoid any oversight in the training of the residents (Siegel and Mongert, 1961), (Roth and Glynn, 1964; Cruikshank, 1986).

While considering dissection of retroperitoneal space, the surgeon should not forget that it is a specialized technique to ligate internal iliac vessels which can offer last hope to our patients where other conventional conservative methods to control bleeding fail. It is surprising that the procedure is too often neglected and has not been sufficiently described or publicised for benign gynaecologic surgery. Viewing its wider utility in future it has been considered worthwhile to re-evaluate the efficacy of this specialized technique in benign gynaecologic surgery to reduce morbidity and mortality which could ordinarily have occurred because of uncontrolled postoperative and intraoperative haemorrhage unresponsive to conventional methods of controlling bleeding.

MATERIAL AND METHODS

Thirty-six women underwent dis-

section of retroperitoneal space for various indications as mentioned in Table I. in the department of obstetrics and gynaecology of government medical college and SMGS hospitals, Jammu. All were followed up for 3 months after the date of discharge for complications like urinary retention or fistula formation or ischaemia of vulva, buttocks or legs, bowel complications like tenesmus, passing of mucous or blood or fistulae formation.

The retroperitoneal space was open through the transperitoneal approach by giving an incision which divided the round ligament at the junction of middle and medial third and then proceeding superiorly. The internal iliac arteries were ligated distal to the posterior division, when the posterior division was not readily apparent, the ligation of internal iliac artery was done 2.5-3.0 cms distal to its origin.

RESULTS

The mean age of the patients was 40.4 ± 3.1 years and mean parity was 3.7 ± 1.3 .

There was considerable decrease in blood loss during surgery in cases where prophylactic ligation of both internal iliac arteries was performed. Intraoperative and post-operative haemorrhage and controlled by this procedure. There was no intraoperative injuries either to ureter or blood vessels or gut.

The incidence of post-operative complications like fever, abdominal wound infection, vaginal vault infection was not increased. None of the patients had any immediate post-operative urinary complaints like urinary retention or fistula

Table I

Indications for Retroperitoneal Space Dissection

(1)	Hypogastric artery ligation		
(a)	Post Operative Haemorrhage		
	Following Abdominal hysterectomy	3	5
	Following Vaginal hysterectomy	2	
(b)	Intraoperative haemorrhage		
	Abdominal hysterectomy	1	
	Vaginal hysterectomy	1	6
	Caesarean hysterectomy	1	
	ISCS and PPH	3	
(c)	Prophylactic	12	
(2)	Exploration of ureter		Nil
(3)	Training of Residents		13
Total			36

formation for long term complications like ischaemia of vulva, buttocks or legs, Bowel complications like tenesmus, passing of mucus or blood or fistula formation were also not observed. Mean post-operative hospital stay of patients was 8.8 ± 4.2 days.

Since there was no significant blood loss because of operative procedure, the patients did not receive any transfusion for procedure but the blood transfusion was required in critically ill patients who had uncontrollable post-operative haemorrhage as a complication of original operative procedure.

DISCUSSION

Interest in dissection of the retroperitoneal space for surgery for benign gynaecologic lesion has been increasing in the past one decade. Attention has been directed to this procedure so as to effect

a bloodless, simple and rapid exposure in difficult pelvic operations complicated by inflammatory diseases, endometriosis and acute haemorrhage in pelvis.

Invariably the dessection of retroperitoneal space has been done to ligate hypogastric artery to prevent intraoperative haemorrhage. Operative blood loss was significantly reduced in cases with prophylactic hypogastric artery ligation. Similar observation have been reported by Cruikshank (1986). Hypogastric artery ligation was done to control post-operative haemorrhage in 5 patients. All these patients survived. Hypogastric artery ligation, if done in time, is the last resort to save life in un-controlled post-operative haemorrhage.

It has been assumed that ligation of hypogastric vessels would impede the blood flow to various organs. So the ischemia of bladder, rectum, perineum,

buttocks, and lower limb were expected to occur until the knowledge of collateral circulation and haemodynamics became clear. The fear of compromised circulation to pelvic organs continued to disturb the surgeon. None of the patients in our study had ischaemia of pelvic viscera, perineum or buttocks, similar findings have been reported by other works (Binder and Mitchell 1960, Siegel and Mongert 1961 and Roth and Glynn 1964). Some investigator (Given et al 1964, Shinagawa 1964) reported pregnancies in women who underwent bilateral hypogastric artery ligation, thereby strengthening the fact that Hypogastric artery ligation does not hamper the blood supply to pelvic viscera, perineum and buttocks etc.

Many gynaecologists would not consider ligation of hypogastric artery. It is mainly because of their unfamiliarity with the procedure. Thus it becomes necessary

that resident surgeons must be imparted training in the technique to avoid many deaths which could otherwise occur either during confinement, or during surgery or postoperatively because of uncontrollable haemorrhage. Training of residents becomes primarily a significant indication to advocate ligation of hypogastric artery following dissection of retroperitoneal space.

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