Transcervical Resection of Endometrium — Will it edge out Hysterectomy

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Abstract

The most frequent indication for hysterectomy is menorrhagia, even though the uterus is normal in a large number of patients. Transcervical resection of the endometrium (TCRE) is a less drastic alternative, but success rates have varied and menorrhagia can recur. 60 patients with menorrhagia due to various causes who failed to respond to medical therapy and did not desire pregnancy and hysterectomy underwent TCRE with hysteroscope. 56 cases have been followed up postoperatively for 3 years. The primary endpoints were women's satisfaction and need for further surgery. The proportion of patients who attained amenorrhea 24 months after the procedure was 44.4% and the percentage of patients who attained hypomenorrhea was 44.4%. The patients satisfaction rate after 24 months of follow up was 88.8%. Failure of TCRE procedure was encountered in 6.6% of patients. Randomized comparison with hysterectomy has shown short-term benefits in the form of shorter operating time, fewer complications and faster rates of recovery and almost as high satisfaction levels. TCRE is an effective procedure in treating menorrhagia and is an acceptable alternative to medical management and hysterectomy in the treatment of menorrhagia for many women with no other serious disorders.

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Introduction

Menorrhagia or heavy menstrual loss is an everyday problem in gynaecological practice and accounts for 10-15% of all referrals at outpatient gynaecological clinics. Many of these women are initially prescribed medical treatment and if the same fails majority eventually undergo hysterectomy. Hysterectomy offers a definitive treatment and complete cure of the condition, thus avoiding continued long term medical therapy and elimination of any missed pathology including unsuspected malignancy. It is nevertheless a major operative procedure with well documented short-term and long-term complications [1]. Of late, hysteroscopic techniques for endometrial ablation are emerging as viable alternatives to hysterectomy in cases of dysfunctional uterine bleeding. These techniques reduce patient morbidity and mortality, duration of hospital stay and entail lesser operative cost. TCRE, one of the endometrial ablation techniques has been shown to be effective and achieves high rate of patient satisfaction (88.8%). At present, it is recommended that this technique should be offered as an alternative to hysterectomy after medical management has failed, particularly when it is desired to preserve the uterus or if hysterectomy is dangerous due to concomitant systemic illness [2].

The newer techniques are being used throughout the

world and short-term safety and effectiveness of these procedures are well documented, while long term outcome studies are still awaited. We evaluated hysteroscopic surgery in comparison with hysterectomy in women with dysfunctional uterine bleeding. The operative complications, postoperative recovery, clinical outcomes and patient satisfaction have been compared with two types of procedures.

Material and Methods

A prospective study of effects of TCRE on 60 patients was carried out at a teaching hospital and research institute from Jan 1997 to Jan 2000. Patient population consisted of women attending gynaecological outpatient department. They were eligible if they presented with complaints of heavy menstrual loss, their family size was complete, they had a clinical diagnosis of dysfunctional uterine bleeding, uterus less than 6 week size and normal endometrial biopsy. Patients who underwent medical management for their menstrual problems and had not responded, patients with small submucous fibroids less than 5cm diameter and patients with cardio-respiratory diseases, which precluded surgery, were also included. Younger women with puberty menorrhagia, those desirous of conserving fertility, those having utero-vaginal descent or incontinence of urine or coexisting endometriosis or adenomyosis or pelvic infection or multiple intramural/submucous fibroids or any evidence of malignancy were excluded. Patients were allocated to the two groups-hysterectomy or TCRE group.

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All patients found eligible to undergo TCRE were thoroughly counselled about nature, merits and demerits of the procedure. They were suitably investigated, informed written consent was taken. In case they were unwilling, they were allocated to the other group. The surgical procedure was performed under general anaesthesia using roller ball coagulation at the fundus and cornual region while resection of the cavity walls was done using an angled cutting loop, with 1.5% glycine solution as distending medium. A universal camera was used which was connected to the monitor via VCR, which helped us to record interesting cases. No preoperative antibiotics and endometrial thinning agents were used. The patients in the second group underwent standard hysterectomy procedure. The patients after the initial management had been under periodic follow up. They were coming to gynecology outpatient every three months or earlier in case of any problems.

Results

120 eligible patients gave written consent to the trial and were randomly allocated to the two groups. The study of TCRE for abnormal uterine bleeding was done on 60 patients. The type of study was cross sectional descriptive study. The effects of TCRE on menstruation and satisfaction rate were assessed in polychromatic scale. The other 60 patients underwent abdominal hysterectomy. The two groups were compared for all variables, and no significant variables were identified. There were no withdrawals. 110 patients had been treated medically before they joined the trial. Table 1 gives the preoperative details of women in the two groups. As depicted, there were no significant differences for the majority of the variables in the two groups.

Table 1

Pre-operative patient characteristics

	Hysterectomy n-60		TCRE n-60	
Mean age in years	41		42.6	
Parity	3.5		3.3	
Menstrual symptoms				
Menorrhagia more than 7 days	48	80%	45	75%
Cycles less than 4 week	24	40%	30	50%
Dysmenorrhea	40	66%	30	50%
Duration more than 2 years	12	20%	15	25%
Premenstrual symptoms	12	20%	50	83%
Initial medical treatment	60	100%	50	83%

In the hysteroscopy procedure group, surgery had to be abandoned before completion in one case and in another case TCRE was completed as a two step procedure and 4 women had hysterectomy. 6 of the patients underwent laparoscopy as uterine perforation was suspected - the same was repaired endoscopically. Abdominal hysterectomy was performed in 60 cases, 10 of whom had bilateral salpingo-oophorectomy. Table 2 gives the operative details.

Complications in the hysterectomy group were in the form of anaesthetic complications in 2 and wound sepsis in 6 (10%). Complications in TCRE group were encountered in 23.2% of patients, which were of minor nature and were managed intra-operatively. The commonest complication

Table 2

Operative details

	Hysterectomy n-60		TCRE n-60	
Mean time of operation	65 minutes		40.16 minutes	
Mean hospital stay	07 days		2.7 days	
Complications				
Anaesthetic	3	5%	1	1.5%
Hemorrhage	6	10%	2	3%
Blood transfusion	6	10%	0	
Vault hematoma	3	5%	0	
Wound hematoma	6	10%	0	
Infection				
Pelvic	3	5%	0	
Urinary	9	15%	0	
Bladder injury	1	1.5%	0	
Fluid overload	0	0		
Uterine perforation	0		6	10%
Incomplete surgery	-		2	3%
Laparotomy/scopy	-		6	10%
Post operative recovery				
Pyrexia	3 days		1 day	
Vaginal bleeding	4.2 days		3.53 days	
Vaginal discharge	12.7 days		5.3 days	
Pain abdomen	9.4 days		1.7 days	
Return to domestic work	15 days		4.3 days	

Table 3

Follow up of TCRE patients

Period	No of patients	Percentage
More than 3 months	60	100
6 months	59	98.5
12 months	36	60
24 months	18	30

Table 4

Effects of TCRE on menstruation

	After 6 months	After 12 months	After 24 months
Patients on follow up	59	36	18
Amenorrhea	20 33%	18 50%	8 44.4%
Hypomenorrhea	38 63.3%	16 50%	8 44.4%
Same	01 1.5%	02 6%	02 11.1%

Table 5

Patient satisfaction rates (with treatment for 2 years)

	TCRE n-18		Hysterectomy n-60	
Well satisfied	8	44%	45	75%
Satisfied	8	44%	10	16.6%
Not satisfied	2	11%	5	8.3%

encountered was uterine perforation in 6 cases (10%). Uterine perforation occurred mainly during dilatation of cervix for hysteroscope introduction and during resection procedure in the cornual region. 98.5% of the patients were studied for a period of more than six months, 60% for more

than 12 months and 30% for more than 2 years. Hysterectomy patients were followed for 6 months.

The proportion of patients who attained amenorrhoea 12 months after the procedure was 44.4% and who developed hypomenorrhoea was 44.4%. The patient satisfaction rate after 24 months of follow up was 88.88% and the percentage of patients not satisfied at the end of 24 months was 11.12% in the TCRE group. Failure of TCRE procedure was encountered in 2 patients. These patients were offered repeat TCRE procedure. But they were willing for hysterectomy and underwent the procedure. Examination of the specimen showed undetected uterine leiomyoma in one and one showed adenomatous hyperplasia. All the patients suspected of having a uterine perforation underwent diagnostic laparoscopy to assess the extent of visceral injury. Haemorrhage was controlled using roller ball coagulation. Uterine tamponade using Foley's catheter was used in three cases, as the haemorrhage was uncontrollable. Repeat procedure using roller ball coagulation was done on the second post operative day in one patient when bleeding recurred on removal of the uterine tamponade. One patient underwent endometrial polyp resection along with the TCRE procedure. In one patient, the procedure was incomplete and anterior wall resection was not done as the patient started having ventricular arrhythmias due to anaesthetic complications, when the procedure was almost complete. Most of the complications occurred in the initial few cases during the early phase of the learning curve. All the patients who suffered uterine perforation were given prophylactic antibiotics to prevent infection. Post operative pyrexia was diagnosed when the temperature exceeded 100.4°F.

Discussion

There is profound enthusiasm towards minimal access surgery and this trend is likely to continue. It is a rare event for an entirely new procedure to be accepted and introduced into routine practice in a short span and TCRE for the management of abnormal uterine bleeding may be considered such a development. In the present study, an attempt has been made to highlight the advantages of TCRE procedure over hysterectomy. Also the problems and complications encountered during this procedure, which is introduced as a new treatment modality for the treatment of abnormal uterine bleeding, are studied.

It has been shown that when performed in experienced hands or when under supervision, TCRE procedure is superior to hysterectomy in terms of intra and post operative morbidity [3,4]. The rate of uterine perforation was higher as compared to other reports which is explained by the fact that practically all perforations occurred in the initial phase, were recognised and managed laparoscopically [5], the high incidence of minor morbidity, principally infection, in the hysterectomy group is similar to that previously reported.

The TCRE operation time is significantly shorter than hysterectomy and there is reduced post operative

recovery time and stay in the hospital. This is perhaps the greatest benefit of hysteroscopic surgery [6]. The findings in this study compare favourably with many other studies. The main advantage of hysterectomy over TCRE is that it guarantees amenorrhea and leads to high patient satisfaction levels. The TCRE also produced amenorrhea in 44.4% and hypomenorrhea in 44.4% and patient satisfaction levels in this study with TCRE are as good as they are in some other contemporary studies [4,7]. TCRE also led to disappearance of dysmenorrhea and premenstrual symptoms in majority of our patients. Long term follow up of these patients will lead to more valid comparison between the two procedures.

There is a risk that TCRE, being a minimally invasive surgery may result in a considerable number of procedures being carried out as an alternative to the initial medical management. These operations however, are not minor and are associated with some short term and long term complications, so one must justify the intervention. Its effectiveness in this trial, reduced morbidity, stay in the hospital and recovery period gives it a distinct edge over the widely practised hysterectomy procedure.

TCRE is an effective procedure for the treatment of menorrhagia and is fairly safe in the hands of an experienced surgeon. Although hysterectomy is superior in terms of overall patient satisfaction, it is associated with greater morbidity. Hysteroscopic surgery can be recommended and should be encouraged as an alternative for the majority of women when conservative treatment has failed.

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