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The Day-care Unit
(A Patient and Personnel Oriented and Cost Effective Patient Management)

Aisha Malik, Saad Raana
Department of Obstetrics & Gynaecology, Lady Willingdon Hospital

SUMMARY

A retrospective study of hospital records was conducted to evaluate the usefulness of Day-care Unit established in Lady Willingdon Hospital. During the year 1997 570 patients were diagnosed and treated in this day care unit. Office procedures carried out included 411 hysteroscopies, 90 laparoscopies, 15 cystoscopies, 30 colposcopies/cervical biopsies and 24 vulval growth removal/bartholin abscess drainage procedures. 4 out of 570 patients (0.7%) had to be admitted because of complications. The incidence of undesirable side effects was 4.2%.

INTRODUCTION

Endoscopic instruments were developed in the early part of the 20th century. For example, the colposcope was developed in 1925 and is well established in clinical gynecologic practice. The use of these instruments has made it possible for various diagnostic and therapeutic gynaecological procedures to be carried out on outpatient basis.

In U.K. formal daycare units were introduced in early seventies to reduce the waiting time for various endoscopic procedures, which were being delayed due to non-availability of hospital beds.

Daycare unit is becoming increasingly popular in the western world; various names used for it are ambulatory surgery; same day surgery or outpatient surgery. The cost effectiveness of these daycare units make them particularly attractive for countries with a limited health budget.

Based on the increasingly large workload of a busy teaching hospital like Lady Willingdon, it was felt that it was necessary to re-organize the care system in gynecology. In January 1997 a day clinic with 15 beds was established to provide the service of endoscopic, diagnostic and minor therapeutic gynecological procedures. Aim of this study was to evaluate the benefits for patients and health care workers and the cost of day hospital care.

MATERIAL AND METHODS

Retrospective survey of hospital records from January to December 1997, of all patients treated in day care clinic was used in this study[1]. All these patients initially presented in out-patient clinic of Lady Willingdon Hospital with varying complaints. They had pre-operative assessment by history taking, physical examination and laboratory investigation at the time of their first visit while being booked for day care clinic. To add to the efficient functioning of the clinic and patient convenience, all patients deposited a token sum to the pharmacy and were given a receipt at the same time. This saved the patient from the inconvenience of being asked to purchase medicine at the time of procedure. Provision was made to provide everything required for the given procedure free of further charge at that time. Patients felt to be deserving of more assistance were provided the service totally free of charge.

Comparison with data during the previous year i.e. 1996, showed the outcome for patients with similar distribution of sex, age group, areas of residence, clinical procedures, financial provision, treated in the same hospital in the conventional system.

RESULTS

570 patients with age ranging from 14 to 75 years were treated in day care clinic during one-year period. Patients were assessed regarding mode of presentation, specific procedure undertaken and outcome for patient.

The commonest symptom with which patients presented in our outpatient was menstrual disorders. Out of 570 patients booked for daycare surgery, 312 patients (54.7%) had menstrual disorders. The second most common presentation was fertility deprivation. A total of 108 patients (18.9%) were booked for investigation and management of this problem.

Other less common symptoms included vulval growth/swelling/pain (4.2%), pelvic pain (2.6%), postmenopausal bleeding (2.6%), urinary symptoms (2.6%) and assessment of cervical growth (2.6%).

Table 1: Mode of Presentation (n=570)

Symptoms	*Number*	*Percent*
1. Menstrual problems	312	54.7
2. Fertility deprivation	108	18.9
3. Vulval growth/swelling/pain	24	4.2
4. Pelvic pain	15	2.6
5. Postmenopausal bleeding	15	2.6
6. Urinary symptoms	15	2.6
7. Cervical Growth	15	2.6
8. Recurrent abortion	12	2.1
9. Assessment of tubal recanalization	12	2.1
10. Abnormal discharge	10	1.7
11. Suspected ectopic	6	1.5
12. Misplaced contraceptive device	6	1.5
13. Post-coital bleeding	5	0.8
14. Secondary amenorrhoea	3	0.5
15. Post C-section bleeding	3	0.5
16. Persistent bleeding after evacuation of molar pregnancy	3	0.5

Less frequently following cases were also seen. Recurrent abortion (2.1%), assessment for tubal recanalization (2.1%), diagnosis of abnormal vaginal discharge (1.7%), retrieval of misplaced contraceptive device (1.5%), evaluation of suspected cases of ectopic pregnancy (1.5%), investigation of post-coital bleeding (0.8%), diagnosis of cases of amenorrhea (0.5%) and persistent bleeding after evacuation of molar pregnancy (0.5%) or post c-section bleeding (0.5%).

If we look at the procedures undertaken in daycare unit, most frequently carried out procedure was hysteroscopy performed on 411 out of 570 patients (72.1%), Laparoscopy was performed on 90 patients (15.7%), colposcopy/cervical biopsy was required for 30 patients (5.1%), drainage of Bartholin's abscess was done on 18 patients (3.1%), 15 cytoscopies were performed (2.6%), and 6 vulval growths were removed (1.4%).

Table 2: A breakup of specific procedures undertaken (n=570)

Procedure	*Number*	*Percent*
1. Hysteroscopy	411	72.1
2. Laparoscopy	90	15.7
3. Colposcopy / Cervical biopsy	30	5.1
4. Drainage of Bartholin's abscess	18	3.1
5. Cystoscopy	15	2.6
6. Removal of vulval growth	6	1.4

The outcome for patients in terms of result of procedure and pathology found is given separately for different procedures.

411 hysteroscopies were performed during one-year period. Majority of patients presented with menstrual problem. Hysteroscopy in such patients helped to spell out the underlying pathology, which varied from endometrial hyperplasia to benign polyps to endometrial malignancy. Other indications for hysteroscopy included fertility deprivation, postmenopausal bleeding, recurrent abortion, misplaced IUCD, post c-section bleeding, secondary amenorrhea and persistent bleeding after evacuation of molar pregnancy. The procedure was helpful as it helped to determine or exclude underlying pathology.

Total of 90 laparoscopies were performed for different indications including fertility deprivation, pelvic pain, assessment for tubal recanalization and suspected ectopic.

These results are similar to those reported in a 5-year audit of laparoscopic appraisal of infertility and pelvic pain in Pakistani women[2].

Table 3: Indications and Findings of Hysterscopies (N=411)

Indication	*Number*	*Pathology*	*Number*	*Percentage*
Menstrual Problem	312	Endometrial hyperplasia	99	31.7
		Fibroid uterus	42	13.4
		Endometrial polyp	51	16.3
		Retained products of conception	6	1.9
		Endometrial carcinoma	6	1.9
		No pathology found	111	35.5
Fertility Deprivation	54	No uterine factor	36	66.6
		Submucous fibroid	9	16.6
		Intrauterine adhesions	9	16.6
Postmenopausal Bleeding	15	Atrophic endometrium	9	60
		Hyperplastic endometrium	3	20
		Friable growth (adenocarcinoma)	3	20
Recurrent Abortion	12	Uterine septum	9	75
		Submucous fibroid	3	25
Misplaced IUCD	6	IUCD retrieved	4	66.6
		IUCD missing	1	16.6
		IUCD perforated	1	16.6
Post C-section bleeding	3	Retained POC's	2	66.6
		No pathology	1	33.3
Secondary amenorrhoea	3	Asherman's syndrome	1	33.3
Persistant bleeding after evacuation of molar pregnancy	3	Retained POC's	1	33.3
		No pathology	2	66.6

Table 4: Indications and results of laparoscopies (n=90)

Indication	*Number*	*Pathology*	*Number*	*Percentage*
Fertility Deprivation	54	No tubal/ovarian factor	15	27.7
		Polycystic ovaries	9	16.6
		Tubes adherent	18	33.3
		Hydrosalpinx	9	16.6
		Endometriosis	3	5.5
Pelvic Pain	15	Adhesion/tubo-ovarian mass	6	40
		Endometriosis	6	40
		Normal pelvis	3	20
Assessment for Tubal Recanalization	12	-------	----	----
Suspected Ectopic	6	Ectopic present	4	66.6
		No ectopic	2	33.33

15 cystoscopies were performed for mixed urinary symptoms. No tumor was found in any patient. Colposcopy and cervical biopsy were performed for symptoms like post-coital bleeding and purulent, blood stained vaginal discharge. The majority of patients had advanced stage-III cervical cancer. All vulval growths removed turned out to be benign.

A comparison of similar procedures carried out conventionally on inpatients basis was done with daycare surgery. Duration of hospital stay was reduced 7-fold from average stay of 43.2 hours for inpatients to 6 hours for daycare clinic.

Table 5: Comparison of duration of stay in hospital.

Procedure	*Hospital stay (Hours)*
In-patient	43.2
Day care clinic	6

Comparing cost to patient for similar procedure carried out as inpatient, it was seen that cost was almost four times higher.

Table 6: Cost to patient

Procedure	*Cost in rupees*
In-patient	380
Day care clinic	100

The incidence of undesirable side effects as nausea, vomiting and pain was reported in 24 out of 570 patients (4.2%). This is comparable to incidence reported in other international studies[3,4]. Complications including those of anesthesia, perforation, fluid overload & metabolic disturbance and introduction of infection was negligible (0.7%)[5]. Both of these compare favourably with in-patient management.

If contra-indications to endoscopic procedures are observed, the incidence of complications remains low[6]. The inexperienced, unsupervised surgeon is most likely to encounter significant complications.

DISCUSSION

It appears that the largest groups of patients treated in day care clinic were those who presented with menstrual problems; either menorrhagia or persistent irregular bleeding[7]. In over 65% of such patients hysteroscopy was helpful in finding out underlying pathology. In certain cases (as endometrial polyp) it was curative as well. In others like fibroid or endometrial hyperplasia, it helped to spell out further line of management (medical/surgical) as appropriate.

It appears that office hysteroscopy is a state of the art investigation, which can be performed in an office setting with small discomfort to the patient. The procedure enables the physicians to search for organic intrauterine abnormalities and to select the proper form of therapy based on the observation[8]. In the future it will become the standard of care as the first step for evaluation of causes of abnormal uterine bleeding in selected patients[9].

The second largest group was related to diagnostic work-up of sub-fertile patients. In approximately one-third of these patients, no tubal/ovarian factor was seen and they were treated as unexplained infertility. In the remaining, tubal adhesions and polycystic ovaries were treated laproscopically at the time they were seen[10]. Patients with advanced tubal disease were unlikely to benefit from intervention and were counseled for IVF or adoption.

Regardless of patient's presenting complaints, day care procedures were helpful in making diagnosis and managing patients effectively in all instances. Increasing number of patients prefer the day care clinic to the ward. The number of patients treated increased from 22 patients in January 1997 to 48 patients in December 1997. The advantages to the patient include seven-fold reduction in duration of hospital stay and four-fold reduction in cost.

Based on the results of questionnaire answered by nurses, working at the daycare clinic is beneficial for health care workers[11].

Outpatient based procedures and daycare surgery have been popular in the western world for many years. An audit of 978 such cases over period of 2 years was reported in British Journal of Obstetrics & Gynecology in March 1995. It showed that consultants performed the majority of procedures. Complications occurred in 12% of cases and included one death from toxic shock

syndrome. Uterine perforation and significant fluid overload occurred in 1% of cases. Patient satisfaction was assessed at six and twelve months post-operatively by postal questionnaires. 84% of those returning their questionnaires were satisfied or very satisfied at twelve months. Comparing these with our study, a significant difference is that incidence of complications is much lower in Lady Willingdon Hospital (4.2%) as compared to (12%) and no mortality has been reported. Possible explanation is that we carry out only diagnostic procedures and do not embark on endoscopic surgery, as we have no formal training in this field.

CONCLUSION

On the whole, the day clinic is convenient and cost effective for both the consumer and the health care provider. In view of its multiple advantages, the demand for such centers will increase in future and we should re-organize our health care system accordingly.

Workshops should be conducted in teaching hospitals to train gynecologists in endoscopic procedures. Their level of competence should be formally assessed and certified. Only those consultants who have attained the desired level of competence should be allowed to practice independently, in interest of patient safety. The inexperienced, unsupervised surgeon is most likely to encounter significant complications.

Another key-point is that successful endoscopic procedures are the result of a team effort. No single person can be operating on his own. To this end, we require good theatre technicians, daycare nurses and a back-up team for maintenance of this expensive and highly sophisticated equipment. The nurse's role is pivotal in simplifying office procedures through empathetic preparation and support of women, careful planning, procurement of necessary items and finally conscientious care of the instruments.

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The Authors:

Aisha Malik,
Assistant Professor
King Edward Medical College,
Department of Obstetrics & Gynaecology,
Lady Willingdon Hospital
Lahore

Saad Raana
Professor and Head of Department
King Edward Medical College,
Department of Obstetrics & Gynaecology,
Lady Willingdon Hospital, Lahore

Address for Correspondence:

Aisha Malik,
Assistant Professor
King Edward Medical College,
Department of Obstetrics & Gynaecology,
Lady Willingdon Hospital, Lahore