

Caritas Medical Centre day surgery pilot study

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From April 1995 through September 1995, a day surgery pilot study was conducted by the Department of Surgery, Caritas Medical Centre, Hong Kong. The aim was to introduce the day surgery concept and to assess local patient acceptance of day surgery. One hundred and seventy patients, mostly below 50 years of age, were operated on as day surgery patients during the six months. Only two patients were admitted after their operations. The most common early post-operative problems were vomiting (15 patients) and headache (14 patients). Eighty-three per cent of the patients who responded to a satisfaction survey rated their overall satisfaction as good or excellent. In conclusion, younger patients accepted the day surgery concept readily and were mostly satisfied with the day surgery experience. Detailed pre-operative briefing and attention to case selection appear useful in achieving high patient acceptance and satisfaction.

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Introduction

Since the establishment of the Hospital Authority in Hong Kong, public hospitals and physicians have witnessed dramatic shifts in the surgical market from the in-patient setting to the day surgery setting. The Department of Surgery at Caritas Medical Centre proposed establishing a day surgery ward in 1995 and was commissioned to coordinate the overall development of day surgery in the hospital. There was uncertainty regarding whether the local community, not previously exposed to the day surgery concept, was ready to accept it. Consequently, a day surgery pilot study was conducted from April 1995 through September 1995. The study's aims included introducing the day surgery concept to patients, identifying possible practical problems, as well as assessing patient acceptance of and satisfaction with day surgery.

Subjects and methods

During the study period, all new patients referred

to the surgical outpatient department were given a five minute audio-taped briefing on the day surgery concept. Suitable patients (see selection criteria Table 1) were booked in as day surgery patients and received pre-admission assessment and counselling from the first author immediately following their surgical consultation. On the day following the day surgery operation, a telephone interview was conducted by a registered nurse to record all early post-operative problems. A questionnaire was used to assess patient acceptance of day surgery and satisfaction when patients returned one week later for follow up.

As a result, 170 patients were operated on and 175 operations were performed. The number of operations exceeded the number of patients by five, as five patients had double procedures performed. One hundred and twenty-four patients were male and 46 were female. Two patients were older than 50 years, 71 patients were between the ages of 12 and 49, and 97 were younger than 12 (range, 1 - 67 years). A summary of the procedures performed is given in Table 2. Only two patients older than 50 years had chest X-rays, ECGs, and blood tests taken. One hundred and sixty-three patients had general anaesthesia, five patients had spinal anaesthesia, and two patients had regional anaesthesia.

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Table 1. Day surgery patient selection criteria

A) Operation selection criteria	
1	The operation should not last longer than 90 minutes.
2	The requirement for blood transfusion should be unlikely.
3	Risk of post-operative surgical complications should be minimal.
4	Prolonged bed rest of the patient should be unlikely.
5	Post-operative pain should be adequately controlled by oral medications.
B) Patient selection criteria	
1	Age: Patients between 6 months and 70 years of age are generally acceptable. Patients over the age of 70 may still be included if they are fit and healthy.
2	Anaesthetic risk: Only ASA Class 1 and Class 2 patients are acceptable.
C) Selection criteria with regard to social circumstances	
1	The patient (or parents) must be able to understand and comply with instructions.
2	The patient must have a responsible and capable adult to accompany him/her home after the operation and to look after him/her at home until the next morning.
3	The patient must have a telephone (or access to one) at home.
4	The patient should be able to get to the hospital easily should an emergency occur.

Results

General performance indicators

A total of 176 patients were booked in for day surgery operations. Three patients defaulted (3/176, 1.7%) and three patients had their operations cancelled on the day of operation (3/176, 1.7%). All 170 post-operative patients (100%) were followed up in the outpatient department. One hundred and fifty-three patients (90%) were contacted for the telephone interview. The post-

operative admission rate was 1.2% (2/170) and two patients (1.2%) returned early for unscheduled follow up, three patients (1.8%) presented to other doctors or hospitals for medical attention, and one patient (0.6%) was readmitted to hospital.

Post-operative problems

Table 3 outlines the various post-operative problems encountered.

Table 2. Types of operations performed under the day surgery pilot programme

Types of operations performed	No. of patients (%)
Circumcision	84 (48.0)
Excision of breast masses	25 (14.3)
Excision of superficial masses	21 (12.0)
Herniotomy or drainage of infantile hydrocoele	21 (12.0)
Excision of warts	11 (6.3)
Inguinal herniorrhaphy	7 (4.0)
Release of tongue tie	2 (1.1)
Panendoscopy	2 (1.1)
Excision of ganglion	1 (0.6)
Biopsy of oral ulcer	1 (0.6)
Total	175 (100)

Table 3. Summary of the post-operative problems encountered

Post-operative problems	No. of patients (%)
Vomiting	15 (8.8)
Headache	14 (8.2)
Sore throat	9 (5.3)
Wound pain	9 (5.3)
Minor wound bleeding	8 (4.7)
Drowsiness	8 (4.7)
Muscular discomfort	7 (4.1)
Nausea	7 (4.1)
Fever	5 (2.9)
Constipation	1 (0.6)
Urine retention	1 (0.6)
Wound infection	1 (0.6)
Allergy to adhesive dressing	1 (0.6)

Patient acceptance and satisfaction

Ninety-six of 170 patients (56.5%) returned their questionnaires. The following is a summary of their responses to the two main questions asked:

1. "Would you recommend day surgery to your friends or relatives?" (this question is used as a proxy measure of patient acceptance of day surgery).

	No. (%) of patients
Yes	75 (78.1)
No comment	19 (19.8)
No	2 (2.1)

2. "How would you rate your overall satisfaction with the day surgery experience?"

	No. (%) of patients
Excellent	31 (32.3)
Good	49 (51.1)
Fair	11 (11.5)
Unsatisfied	2 (2.1)
Very unsatisfied	0 (0)

Discussion

Patients

Of the 170 patients operated on, only two were older than 50. This could well be explained by several factors. Firstly, a general reluctance among older patients to be discharged on the same day of the operation. Secondly, a relative lack of suitable social circumstances among older patients that disqualify them from day surgery (many older patients are not selected because they live in multi-storey buildings without elevators or have no attending responsible adult to look after them during the early post-operative period). Thirdly, surgeons were reluctant to admit older patients for day surgery because pre-admission assessment by anaesthetists was not available at this phase of the service's development.

Patients between the ages of 12 and 50 years, as well as guardians of paediatric patients appeared to accept the day surgery concept readily and also tended to satisfy the selection criteria for anaesthetic risk and social circumstances.

Range of operations

In this study, the range of operations performed was limited. The four most commonly performed operations—circumcision, excision of breast masses,

herniotomy/drainage of hydrocoele, and excision of superficial masses, collectively amounted to 86% of all operations. This can be explained by the surgeons' bias towards caution, given the pilot nature of the study. It is expected that the range of operations will widen with time to include most of the intermediate and minor operations that satisfy the selection criteria, in accordance with the experiences of other day surgery units.

General performance indicators

The Royal College of Surgeons, United Kingdom, suggests that the admission rate following day surgery should be audited as an important performance indicator and recommends that it should be less than 2% to 3%.¹ In this study, the admission rate of 1.2% appears satisfactory. However, this may reflect the limited range of operations performed rather than the standard of care achieved. As the scope of day surgery widens in the near future, a more stringent surgical audit will be required to maintain and improve standards. The same can be said about the relatively low rates found for patients presenting for unscheduled early follow up (1.2%), presenting to other doctors or hospitals (1.8%) for further treatment, and those being readmitted (0.6%).

Post-operative problems

The incidence of post-operative problems, mostly minor, is comparable to the incidence found with surgical in-patients. Although their incidence appears acceptable (range, 0.6%-8.8%), the telephone interviews on the first post-operative day identified those who were dissatisfied—mostly patients who felt that inadequate warning regarding the occurrence of problems had been given.

Patient acceptance and satisfaction

In this study, good levels of patient acceptance of the day surgery concept (78.1%) and of patient satisfaction (83.4% rated their satisfaction as excellent or good) were achieved. These figures are satisfactory given the lack of previous exposure of the local community to the day surgery concept or service. Some patients commented that the introductory audio-tape, pamphlets, and pre-operative briefing were helpful. One important contributing factor could be that these patients, being subjects of a pilot study, were given better than usual explanations and treatment. In addition, the sample of patients studied was a biased one, consisting mostly of children and young adults with favourable medical and social conditions, who nominated themselves for day surgery. Regardless of the real reasons, these early results are promising and indicate that high levels of patient acceptance and satisfaction are achievable.

Conclusion

Our early experience with day surgery is similar to the outcomes found in England and Wales, where the Audit Commission for Local Authorities and the National Health Service concluded that "the vast majority of day-case patients are satisfied with their treatment. The proportion who were dissatisfied is similar to that for in-patients, although the two groups are not directly comparable in this case because day-case patients are younger and fitter."² Day surgery appears to be a viable, acceptable, and satisfactory alternative for suitable patients in the community, especially those younger than 50 years. Older patients appear to be less suitable and willing to undergo day surgery.

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