

Unexpected admissions following a day case surgery

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ABSTRACT

Objectives: A day case surgery is an important part of the practice of surgery and is very popular with expanding applications. The aim of this study is to investigate the reasons for unexpected admission after a day case surgery.

Methods: All the procedures were carried out at a general hospital, over a 12-month period. All data of the cases admitted for a day case surgery were obtained from the day surgery unit and the admitting wards.

Results: There were 5182 surgical procedures performed, 1081 as a day case (21%). Twenty three (2%) patients had to be admitted after planned for a day case

surgery. Fourteen due to hemorrhage in different locations, 2 due to anesthetic reasons, 2 for social reasons and 5 for other different complications. There were 5 unexpected admissions (10%) out of total number of 50, for infants aged 3 months or less.

Conclusion: A day case surgery is a safe and effective way of delivering surgical care with an accepted complication and unexpected admission rate.

Keywords: A day case surgery, unexpected admission, audit.

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A day case surgery is an integral part of today's modern practice of surgery, and very popular due to its cost savings, minimal disruption to the patients routine, shorter waiting time for surgery, lower risk of cross infection and a more rapid social and emotional rehabilitation compared to in-patient stay.¹⁻³ A review of all day cases performed over a 12 month period from 1st January to 31st December 2000 was undertaken, to identify the causes for in patient unexpected admissions with a view to identify and later modify the factors that contributed to these unexpected admissions to improve the overall efficiency of the service. Unexpected admissions to hospital after a day case surgery may be due to surgical, anesthetic or social reasons with a target not exceeding 2%-3%.^{3,4} To achieve a high rate of utilization of day case surgery Goodwin and Ogg⁵

concluded that it was vital that patients are carefully selected and prepared for a day case procedure. Failure to do so will result in falling standards and loss of support from both clinicians and patients.

Methods. Patient details and the operations performed between 1st January to 31st December 2000, were obtained from the day surgery unit at Prince Rashid Hospital, Irbid, Jordan. Unexpected admissions details were obtained from the admitting wards. Operative details, reasons for unexpected admission and other clinical details were obtained retrospectively from the case notes. All patients (1081) were subjected to anesthesia, 611 (57%) had general anesthetic, 426 (39%) had local anesthetic and 44 (4%) had regional anesthetic.

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Table 1 - Total number of operations, operations as day case surgery and the procedures performed.

Speciality/Procedure	n of patients treated as day case surgery	n of unexpected admissions %
General surgery (1852)*	662	18 (3)
Inguinal Herniotomy	302	12
Inguinal Herniorraphy	54	2
Orchidopexy	76	1
Breast Lumpectomy	38	1
Varicose Vein Surgery	7	0
Excision of Lumps	45	0
Hydrocele Excision	27	2
Banding of Hemorrhoids	30	0
Sigmoidoscopy	15	0
Lateral Sphincterotomy	25	0
In growing toe nail	18	0
Other	25	0
Ear, Nose and Throat (319)*	26	2 (8)
Tonsillectomy	18	2
Tonsillectomy & Adenoidectomy	3	0
Other	5	0
Urology (286)*	86	1 (1)
Insertion/Removal DJ cath	54	0
Excision Varicocele	16	1
Other	16	0
Obstetrics & Gynecology (1807)*	105	2 (2)
Diagnostic Curettage (D&C)	83	1
Lap Sterilization	16	1
Other	6	0
Orthopedics (281)*	144	0
Removal of Pins	65	0
Excision of Exostosis	17	0
Other	62	0
Miscellaneous (637)*	58	0
Total	1081	23 (2)
* =total number of patients treated, n=number, DJ=double j catheter,		

Results. The total number of operations performed in this 12 month period were 5182 divided between different specialties with the majority being in general surgery. The total number of patients treated as a day case surgery was 1081 (21%). Out of these, 52 were infants aged 3 months or less. The details of the procedures carried out as day case surgery in different specialties are shown in Table 1.

The complications noted and led to unexpected admission were seen in 23 patients (2%) of the whole group, 5 of them (out of 52) 10% were infants aged 3 months or less. Fourteen had hemorrhage in different locations the hemorrhage was discovered in the

recovery room in all patients but one, who was admitted from home after being discharged, he was a child who was discovered later to suffer from Hemophilia. Two patients were admitted for anesthetic complications, the first had aspirated and the 2nd had difficult and prolonged extubation. Two more patients were admitted for social reasons. The remaining 5 patients were admitted due to unexpected prolonged operation, unexpected surgical findings different from that of the suspected original diagnosis, or unexpected abnormal anatomy encountered during the procedure.

Discussion. A day case surgery offers a highly efficient way of providing clinical service and is believed that nearly 50% of all surgical procedures can be performed as a day case surgery.^{3,5} However, in our study only 21% had this procedure, to achieve a higher rate of utilization it should be demonstrated that it is safe with no adverse effects and unexpected admissions may not be necessary.

Although a wide variation of specialities can utilize day case surgery it is true that different specialties can use this more than others. In our study only 8% of patients had Ear, Nose and Throat procedure. This is low as compared to that reported by Whinney et al⁶ of successful day case surgery in 24%⁷

A review of the cases of unexpected admissions after a day case surgery was undertaken to audit the practice and to identify areas where improvements are possible and then implement them. The proper use of the facilities of a day case surgery can decrease unexpected admissions by proper selection of patients. In this study the unexpected admission rate after a day case surgery was well within the accepted admission rate,⁴ however, a closer look at the results reveals that this can be reduced even further. One group of patients, who had a high unexpected rate of admissions, 10% compared to 2%, are those aged 3 months or less. Therefore, there should be a tighter selection for inclusion for this group for a day case surgery. However, they should not be totally excluded from a day case surgery.

In conclusion, this study demonstrates that a day case surgery is an effective way of delivering surgical care in a district general hospital setting. Nevertheless, lessons can be learned to modify, improve and enhance the overall service.

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