

Day Case Urology in a Dedicated Day Case Surgery Unit in a Nigerian Teaching Hospital

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Abstract

Aim: To find out the extent of day care urologic surgery at the Obafemi Awolowo University teaching hospital complex, Ile-Ife, Nigeria.

Patients and Methods: For this retrospective study we reviewed the data of all urologic patients treated at the day case surgery unit between January 2004 and December 2007. The parameters studied were: age, type of surgery/procedure, anaesthesia administered and the rank of the surgeon.

Results: In total, 532 patients were managed, 218 (41.0%) children aged between one day and 15 years and 314 (59.0%) adults aged between 16 and 85 years. General anaesthesia (GA) was primarily used in children (110 children vs. 8 adults), while local anaesthesia with sedation and topical anaesthesia alone was only used in adults. Topical anaesthesia with sedation was used in 8 (3.7%) children and 65 (20.7%) adults. 100 (45.9%) children (all the circumcision cases) and 50 (15.9%) adults had no anaesthesia. The majority of the procedures were carried

out by the senior registrars (367 patients, 69%). The most common procedures performed in adults were prostate biopsy (97 cases, 30.9%), orchidectomy (70 cases, 22.3%), urethral bouginage (65 cases, 20.7%) and urethrocytostomy (40 cases, 12.7%), while male circumcision (100 cases, 45.9%), hydrocelectomy (57 cases, 26.1%) and orchidopexy (40 cases, 18.3%) were the most common procedures performed in children.

Conclusion: The day care surgery unit is now established. Presently, more adults than children are treated. Most procedures are performed by resident doctors under supervision which allows them to obtain very good hands on experience. The most common procedures are prostate biopsy, orchidectomy, urethral bouginage and urethrocytostomy in the adults, while male circumcision, hydrocelectomy and orchidopexy are the most common procedures in children.

Keywords: Day care urology; Day surgery unit (DSU); Paediatric and adult anaesthesia.

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Introduction

Day case surgery is defined as the performance of a planned surgical procedure with the patient being discharged on the same day. In the USA, it is also called "ambulatory surgery", because the patient is discharged within 23 hours of the procedure.

Day case surgery was first reported in 1909 by James Nicoll, a Scottish surgeon, and in 1912 by Ralph Walter in the USA [1, 2]. Initially there was a slow progress and acceptance of this innovation in both the UK and USA, until in the 1960s and 1970s it became more expensive to keep in-patients on admission and the availability of beds decreased causing prolonged waiting lists. During this time, the day surgery unit (DSU) was introduced by Walter Reed [2, 3], and since then there has been increased improvement in the management of patients on a day case basis and an improvement of methods of anaesthesia ensuring patients' fitness after discharge. In our environment of limited resources and increased hospital attendance very few hospitals so far have established a DSU.

The day case surgery unit of the Obafemi Awolowo University Teaching Hospital, a semi urban tertiary centre in Ile-Ife, Nigeria, was opened in January, 2004, and this study aims to identify the scope of day case urologic surgery in our DSU.

Patients and Methods

This retrospective review of the records of the day case unit covers a period of four years (January 2004 to December 2007). We analysed the following data both for paediatric and adult patients admitted for urologic procedures: age, sex, indications for treatment, type of anaesthesia administered and the rank of the performing surgeon. The data were collected in a proforma and analysed using SPSS version 13 using simple statistics.

Results

In total, 532 urological cases were treated in the DSU; of these 502 major urological procedures were performed in the main operating theatre. 218 (41.0%) patients were children aged between one day and 15 years and 314 (59.0%) were adults aged between 16 and 85 years. Approximately 99% (n=530) of the urology day cases were males.

The indication for management was therapeutic in 378 (71%) patients and diagnostic in 154 (29%) patients. Tables 1 and 2 show the number and type of day case procedures performed in adults (Table 1) and children (Table 2). The most common procedures carried out in adults were prostate biopsy (n=97, 30.9%), orchidectomy (n=70, 22.3%) and urethral bouginage (n= 65, 20.7%), while male circumcision (n=100, 45.9%), orchidopexy (n=40, 18.3%) and

Table 1 Number of day case procedures/surgery in adults during the study period.

Diagnosis	Type of Procedure	Number	%
Prostate cancer	prostate biopsy	97	31.0
Prostate cancer	bilateral total orchidectomy	70	22.3
Urethral stricture	bouginage	65	20.7
Bladder outlet obstruction	urethrocystoscopy	40	12.7
Vaginal hydrocele	hydrocelectomy	22	7.0
Bladder cancer	bladder biopsy	6	1.9
Bladder stone	open cystolithotomy	3	1.0
Varicocele	varicocelectomy	3	1.0
End-stage renal disease	arteriovenous fistula	2	0.6
Post pyeloplasty	DJ stent removal	2	0.6
Male infertility	testicular biopsy	2	0.6
Stage -I urethroplasty	2nd stage urethroplasty	2	0.6
Total		314	100

Table 2 Number of day case procedures/surgery in children during the study period.

Diagnosis	Type of Procedure	Number	%
Intact prepuce	circumcision	100	45.9
Congenital hydrocele	hydrocelectomy	57	26.1
Undescended testis	orchidopexy	40	18.3
Urinary incontinence	urethrocystoscopy	9	4.1
Meatal stenosis	meatotomy	8	3.7
Urinary extravasation	suprapubic cystostomy	3	1.4
Priapism	glandulo-cavernosal shunt	1	0.5
Total		218	100

hydrocelectomy (n=57, (26.1%) were the most common procedures performed in children.

General anaesthesia (GA) was primarily used in children (110 children vs. 8 adults), while local anaesthesia with sedation and topical anaesthesia alone was only used in adults. Topical anaesthesia with sedation was used in 8 (3.7%) children and 65 (20.7%) adults. 100 (45.9%) children (all the circumcision cases) and 50 (15.9%) adults had no anaesthesia. (Table 3)

Table 3 Type of anaesthesia used.

Type of anaesthesia	Children	%	Adults	%
General	110	50.5	8	2.6
Local + sedation	0	0	104	33.1
Topical + sedation	8	3.6	65	20.7
Topical alone	0	0	87	27.2
No anaesthesia	100	45.9	50	15.9
Total	218	100	314	100

The majority of the procedures were carried out by senior registrars (367 patients, 69%), while 88 (16.5%) cases were managed by consultants and 77 (14.5%) by junior registrars.

There was only one hospital admission, namely a child following a glandulo-cavernosal shunt; all other cases were managed in the DSU and discharged on the same day.

Discussion

In the UK, USA and Australia DSUs became established fifty, sixty and eighty years, respectively, after their initial introduction [1,2,4]. In view of the limited resources in developing countries and the need to maximize the use of available resources, the DSU was introduced in the Obafemi Awolowo University Teaching Hospital in January 2004, approximately in the 30th year of our hospital's existence.

In this review, day case urologic procedures constituted 51% of all urologic surgery carried out in our hospital during the study period, which compares favourably with a reported 50% in the UK and Australia [2,4]. In the USA and Canada, day surgery constitutes about 90% of all elective surgical procedures [5].

Part of the requirement for a successful day case surgery practice anywhere is the availability of good anaesthesia. A patient undergoing day case surgery must recover quickly from anaesthesia and ambulate early. The role of cost effective anaesthesia, particularly short acting anaesthetic drugs, in this regard is well established [6]. In our study 50% of the children benefited from general anaesthesia. This low percentage is mainly due to the fact that a significant proportion of paediatric day-case surgery in our environment involves neonatal circumcision, which rarely requires the use of general anaesthesia. As mentioned in an earlier study by Agbakwuru et al. [7], local anaesthesia with sedation is well tolerated by adult Nigerian patients; it was the commonest type of anaesthesia used in our study (n=104, 33.1%), followed by topical anaesthesia alone (n=87, 27.7%).

Given the fact that a significant proportion of the patients undergoing

day case surgery in our hospital are handled by senior registrars and registrars, we believe that the DSU may be an

avenue to improve the efficiency of this group of trainee surgeons in urological procedures. However, this does not mean that the DSU should be left without adequate supervision by the consultants.

Studies have shown that day case surgery is well accepted by patients even in our environment [8–10]. Provided that the necessary technical equipment and an adequately experienced surgeon are available, procedures such as hydrocelectomy, orchidectomy, orchidopexy, male circumcision, transurethral resection of the prostate (TURP) are feasible on a day case basis [7, 10–12].

In conclusion, we believe that day care urology in our DSU has now been well established as shows the increasing number of patients treated. Urology surgical residents have the opportunity to obtain more hands on experience under supervision. It is hoped that more urological procedures will be performed as time goes on. A further prospective study of complications and their outcome is now needed in order to improve the service delivery through our DSU. This review should encourage other teaching hospitals in resource limited areas to introduce a DSU [13].

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