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the unit. 73% of the patients had low numbers of keratomata. These complications due to contact lens services reflection of the regular eye services

only one case of complications due to contact lens services.

2.2% followed by adult males children (4.7%) and children (3.3%). Characters were observed only in adults with an occurrence of 7.3% in males and 9.0% in females.

Day Case Surgery: Experience in a Tertiary Health Institution in Nigeria

Chirurgie au Quotidien: Cas d'un Institut de Santé Tertiaire au Nigeria

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1. Cohen D, Sartal M, Nonnon P, Hammar M, Torand ME, Elamy A. Evaluation of modern day case surgery in a tertiary health institution in Nigeria. *West African Journal of Medicine* 2007; 26(1): 24-27.

ABSTRACT

BACKGROUND: Previous studies on day case surgery in Nigeria have focused mainly on the immediate peri-operative care of the patients within the service hospital.

OBJECTIVE: To assess patients' satisfaction and postoperative complications within the first seven days following day case surgery.

METHODS: A post discharge patient's survey was conducted on the 7th Postoperative day in 102 consecutive patients who had undergone day care surgery. Patients were interviewed about their postoperative experiences, type of complications and treatment applied, and visits to hospitals or community health facilities/providers. They were also asked to comment on their satisfaction or otherwise of day case treatment.

Results: There were 32 occasions of treatment provided to 24 patients (23.45%) after discharge. Seventy-two patients (70.6%) reported one or more complications, with pain being present in all of them. Some patients received treatment more than once, and for more than one complaint. Pain was the most common reason for seeking treatment. There was no mortality. Eighty-six (84.3%) patients expressed satisfaction with day case treatment, while 10 (9.8%) patients (9.8%) expressed dissatisfaction and 6 (5.9%) patients were indifferent.

CONCLUSION: Day surgery provided satisfactory outcome for the majority of our patients, with low complication rates. *W.A.J.M* 2007; 26(1): 24-27.

Keywords: Day case surgery, patient satisfaction, postoperative complications

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ORIGINAL ARTICLE

Only 77% of diagnosis of the study

data for analysis. This may have resulted in an under or overestimation of certain

the ages but not all references to age were specified. In some cases patients were

of child used was of a patient less than 15 yrs of age therefore the author

RESUME

Contexte: Des études récentes concernant les cas de chirurgie au quotidien se sont principalement centrées sur les soins pré-opératoires des patients hospitalisés à l'hôpital.

Objectif: C'est à évaluer la satisfaction des patients et les complications post opératoires dans les sept premiers jours suivant l'opération.

Méthodes: Une étude après la mise en liberté du patient a été conduite le 7^e jour chez 102 patients qui ont subi des interventions chirurgicales. Les patients ont été interviewés concernant leurs expériences post opératoires, les types de complications, le traitement appliqué, et les visites dans les hôpitaux ou dans les aménagements communautaires offrant des soins de santé. On leur a aussi demandé de faire des commentaires concernant leur satisfaction et aussi concernant le traitement des soins de santé quotidien.

Résultats: Nous avons eu 32 occasions de traitement pour 24 patients (23.5%) après qu'ils ont quitté l'hôpital. Soixante-douze (70.6%) ont eu une ou plusieurs complications, tous se sont plaints des douleurs. Certains ont reçu un traitement plus d'une fois et pour plus d'une plainte. La douleur était la raison commune du traitement. Il n'y a pas eu de mortalité. Quarante-six (84.3%) patients ont exprimé leur satisfaction avec les traitements quotidiens, 10 (9.8%) patients (9.8%) ont exprimé leur désarroi et 6 (5.9%) patients étaient indifférents.

Conclusion: la chirurgie quotidienne a offre un résultat satisfaisant pour la majorité de nos patients, avec un taux de complication réduit. *W.A.J.M* 2007; 26(1): 24-27.

Mots clés: Chirurgie quotidienne, satisfaction du patient, complications post opératoires.

presenting five-year data on hospitalized patients in Africa where a study

showed a total of 175 cases were recorded of whom 93% were male. Similarly in Burkina Faso a retrospective study

National Hospital of Ougadougou showed that ocular trauma represented 9.8% of the reasons for consultation in

but most common in the female adult population.

Adults made up only 0.4% of the proportion in males and 0.0% females.

These appeared to be more common in their twenties. Allergic conjunctivitis was practically non-existent in the children

DISCUSSION

growth were low only in adults. Conjunctivitis was the most common eye condition in the children and adults.

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INTRODUCTION

Day case surgery is now well established and practised all over the world. The advantages and benefits of this approach to surgical care have been well documented by various authors^{1,2}. Particularly in developing countries the cost-effectiveness of day case surgery may make it a suitable and preferred alternative form of treatment to patients and health care providers. This is because of high level of poverty, low socio-economic growth and poor health financing. However, one disadvantage of day case surgery is the fact that recovery and possible attendant complications take place at home, away from the watchful eyes of the attending medical personnel. This invariably places the burden of continuing care on the families and primary health care services. Some early research suggested that day case surgery might increase the workload in the primary care³. There is therefore a need to ascertain that the apparent savings in cost and workload accruing to patients and health care service from day case surgery are not simply a shift of work demands and expenditure to the community health resources.

The aims of this prospective study were to measure the type and frequency of complications that develop after discharge within the first seven postoperative days; and to assess patients' satisfaction, following day case surgery performed at Ladoke Akintola University of Technology Teaching Hospital, Osogbo, Nigeria.

PATIENTS AND METHODS

Following Local Ethics Committee approval, all consenting patients presenting for day case surgery between December 2001 and March 2003 were prospectively studied. Selection criteria for day case surgery in our hospital included patients requiring minor or intermediate surgical procedures. Operations likely to significantly exceed one hour, and patients who live at a distance more than one-hour drive from hospital, were excluded from day case surgery. Preoperative assessment was carried out by the anaesthetist in-charge. None of the patients was pre-medicated.

The anaesthetic technique was as

determined by the attending anaesthetist, in consultation with the surgeon. The techniques of anaesthesia employed included general anaesthesia with thiopentone/halothane induction as appropriate, followed by maintenance with halothane and nitrous oxide in oxygen via facemask, supplemented with intermittent bolus doses of pentazocine; local infiltration anaesthesia with 0.5-1% lignocaine; and spinal anaesthesia with 5% heavy lidocaine. The consultant surgeons or their residents operated on the patients.

At the conclusion of the surgery, the patients were observed in the recovery room for periods ranging between 45 minutes and 60 minutes. Analgesics (dipyron and pentazocine) were given for pain relief as required. The patients were later transferred to the wards where they were reviewed by the residents, given outpatient appointment for follow-up and discharged home after 4-6 hours.

All the patients were given acetaminophen (paracetamol) for postoperative analgesia to be taken 8-hourly at home for 3-5 days as required.

On discharge, the patients were advised to report back to the hospital if they had complaints. They were also instructed to note the type and frequency of complications, treatment applied, contacts with hospitals, general practitioners, nurses or any other health facilities, and to note the date and reason for such contacts.

The patients were seen at the surgical outpatient clinic on the 7th postoperative day. During the visit, stitches were removed where applicable, and the patients were interviewed about the postoperative course, types and frequency of complications and visit to hospitals or community health facilities/providers within the first postoperative day. They were also asked to comment on their satisfaction or otherwise of day case surgery treatment.

Details of patient characteristics, anaesthetic techniques employed, surgical diagnosis and type of surgery were extracted from the case folders. The postoperative problems/complications in the recovery room and distance of the patient's home to the hospital were also

noted.

Data were analyzed using Epi Info version 6 software. The results are presented means (SD) and proportions.

RESULTS

Patient Characteristics

A total of 112 patients were operated upon as day cases within the study period, out of which 105 consented to participate in the study. Three patients did not report for follow-up appointment and completion of the assessment, leaving complete result for 102. There were 70 males (68.6%) and 32 females (31.4%). The age distribution of the patients is shown in table 1. The age ranged between 1 month and 83 years with a mean of 28(25.72) years.

Table 1: Age Distribution of the Patients

Age (years)	No. of Patients	%
0-9	16	15.7
10-20	20	19.6
21-30	18	17.6
31-40	8	7.8
41-50	11	10.8
51-60	13	12.7
61-70	11	10.8
71-80	2	2.0
81-90	3	3.0
Total	102	100

The estimated distance from the hospital to the homes of the patients ranged between 200 meters and 13 kilometres. Majority of the patients [45 (44.1%)] lived less than 1 km from the hospital, while only 10 (9.8%) lived more than 10 km from the hospital.

Surgical Procedures/Anaesthesia

Table 2 shows the distribution of the surgical procedures performed. There were equal numbers of minor and intermediate surgical procedures. The most common surgical procedure performed was inguinal herniorrhaphy, which accounted for 32 (31.4%) cases, followed by excisional biopsy [30 (29.4%)] and incisional biopsy [10(9.8%)]. The duration of the procedure ranged between 10 minutes and 80 minutes, with a mean duration of 39(15.21) minutes. The majority of procedures (77.5%) were completed within 40 minutes. Sixty-four

patients (62.8%) patients had general anaesthesia, 31 (30.4%) had local infiltration anaesthesia, while 7 (6.9%) had spinal anaesthesia (See Table 3).

Postoperative Complications

Pain was experienced in the recovery room by all the patients. Analgesics employed included dipyrone

injection in 56(54.9%) patients and pentazocine injection in 46(45.1%) of the patients. Thirty-three patients (32.4%) experienced other complications, which were not severe enough to delay discharge (Table 4).

Seventy-two (70.6%) patients reported having experienced pain of varying degrees of severity at the operation sites within 48 hours after discharge. These patients included virtually all those who had intermediate surgical procedures (Table 2). In [(52(51%) of these patients, pain was reported to be severe within the first 24 hours after a scharge. However by the 7th postoperative day, only 10 (9.8%) still reported pain, which they claimed was mild. Fifteen (14.7%) patients reported having experienced sleep disturbances in association with the pain, while 5 (4.9%) patients had associated nausea but no vomiting, all within the first 48 hours after discharge (Table 3). Eight patients (7.8%), none of whom had spinal anaesthesia, reported having experienced headache of varying duration and severity within 24 hours after discharge. Wound infection occurred in 10 (9.8%) of the patients.

No patient had to be readmitted in any hospital because of complications. There was no mortality in this series.

Patient Satisfaction

Eighty-six patients (84.3%) expressed satisfaction with day case treatment. Ten (9.8%) patients felt dissatisfied and would have preferred to be on admission mainly because of the pain they experienced at home. Six patients (5.9%) were indifferent.

DISCUSSION

The practice of home convalescence following day case surgery is not new in the Western World. In North America and Europe, a large number of surgical operations are now being done as day cases^{4,5}. The success of the practice has greatly encouraged its spread and wide embrace even in developing countries.

Ladoke Akintola University of Technology (LAUTECH) Teaching Hospital is a relatively young tertiary health centre in Nigeria that is actively

Table 2: Distribution of Patients According to Surgical procedures

Surgical Procedure	Number (%) Patients
Minor Surgical Procedures:	
Circumcision	2 (2)
*Excisional biopsy	30(29.4)
Incisional biopsy for breast malignancies	10 (9.8)
Bouginage for urethral stricture	9 (8.8)
Sub-total	51 (50)
Intermediate Surgical Procedures:	
Inguinal Herniorrhaphy	32(31.4)
Inguinal Herniotomy	6 (5.9)
Hydrocelectomy	7 (6.9)
Umbilical Hernia Repair (Mayor's Repair)	2 (2)
Varicocoelectomy	2 (2)
Epigastric Hernia Repair	2 (2)
Sub-total	51 (50)
Grand Total	102 (100)

*Excisional biopsy for lipoma, ganglion, fibroadenoma, and lymph nodes)

Table 3: Surgical procedures vs Anaesthetic technique used

Surgical procedure	No of Patients	Number of Anaesthetic technique		
		General	Local	Spinal
Minor Surgical Procedures:				
Circumcision	2	2	-	-
Excisional biopsy	30	22	8	-
Incisional biopsy	10	3	7	-
Bouginage	9	9	-	-
Sub-total	51	36	15	-
Intermediate Surgical Procedures:				
Inguinal herniorrhaphy	32	15	14	3
Inguinal herniotomy	6	6	-	-
Hydrocelectomy	7	3	-	4
Umbilical hernia repair (mayo's repair)	2	2	-	-
Varicocoelectomy	2	2	-	-
Epigastric hernia repair	2	2	-	-
Sub-total	51	28	16	7
Grand Total	102	64	31	7

Table 4: Frequency and Timing of Postoperative Complications

Complication	Frequency N(%)	
	Recovery Room	Post-discharge
Pain	102 (100)	2 (70.6)
Drowsiness	15 (14.7)	-
Hunger	12 (11.8)	-
Insomnia	-	15 (14.7)
Wound infection	-	10 (9.8)
Headache	6 (5.9)	8 (7.8)
Nausea	5 (4.9)	5 (4.9)

involved in the provision of day case surgery services. Although complications are not uncommon, most of them are minor and easily handled at home without recourse to hospital admission, as seen in this study.

The number of patients who need to seek help from their community nurses, general practitioners and other health care providers within the community after discharge represents an extra burden of day case surgery practice on the healthcare system. This indicates failure of day case practice and tends to erode the gains obtained by performing the surgery on outpatient basis. Our series involved only patients, requiring minor or intermediate surgical procedures. This was to minimize complications and the need to seek medical support after discharge. Close follow-up contact of our patients, as done in other day care centres in developed countries, was not possible in the semi-urban/rural population that we serve. This is due to lack of access to personal telephone by majority of the patients, as seen in this study, coupled with a non-existent organized family care physician service system, and poorly developed home nursing visit programme.

All the complications experienced at home in our series were minor and comparable to those reported in previous studies^{6, 7}. Pain was the most common postoperative problem experienced by the patients, and the main reason for seeking medical treatment at home. This is in agreement with several previous studies⁷⁻⁹. Also, like in previous reports⁷⁻⁹, the first 48 hours after discharge was particularly painful for the majority of our patients.

When postoperative pain is not

adequately managed, the pain is often severe enough to interfere with sleep and daily functioning, as experienced by some of our patients. Even nausea, experienced by a few of our patients, is not an uncommon associate of pain.

Despite the morbidities recorded in our series, most of our patients expressed satisfaction with day case treatment. However, this was just an expression of global satisfaction with day case surgery treatment. It may therefore not be sensitive enough to indicate satisfaction with all aspects of day care service. In any case, the few patients who expressed dissatisfaction with their treatment cited pain as the cause.

Part of the limitations of this study is the fact that although it is a prospective study, part of the information was sought from patients retrospectively. The use of a diary⁹, daily telephone survey or take home questionnaire^{5,7}, to record all complications and healthcare contacts day-by-day after surgery, would have been better. However, this was not possible in this study due to high rate of illiteracy in our patient population and lack of access to personal telephone by majority of our patients. In any case we do not expect this limitation to affect our findings significantly since the study only tried to document the occurrence of postoperative complications, and not the severity of the complications, the recollection of which can fade with time. Furthermore, patient reporting is known to be an effective method of monitoring post-discharge outcome⁹.

In conclusion, the safety of day case practice has been demonstrated in this study. Pain remains a very common

complication of day case surgery in our environment. There is need to improve the post-discharge experience of the patients by ensuring that they are provided with adequate analgesia at the time of discharge.

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