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Milestones of daycare surgery activities at Karnali Teaching Hospital over a period of two years

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Abstract

Introduction: Minor surgery has been performed regularly in Hospitals, surgical, outpatient, and emergency departments as a day care surgery for years. In modern-day hospitals, there are established principles for ambulating surgical patients as early as possible. This idea led to the concept of daycare surgery.

Method: A retrospective study was conducted at the Karnali Teaching Hospital, Jumla, Nepal, over two years from 17 July 2021 to 16 July 2023 under the Department of Surgery, and the data were analyzed. A total of 580 patients who underwent daycare surgeries in the department of surgery were included in the study.

Result: Total of 580 minor surgeries (daycare surgery), were performed. Total males were 340 (56.5%), and females were 240 (43.5%). Among them, 348 (60%) were done under local anesthesia and 232 (40%) under intravenous anesthesia. Incision and drainage for abscess were done in 155 (26.5%) patients, Excision of the lump was done in 150 (25.5%), and non-scalpel vasectomy was done in 120 (20.5%) patients.

Conclusion: During two years, daycare surgery was 57.5% of total surgery. By organising good daycare surgery services, the percentage of cases can be increased and a patient-friendly environment can be created.

Keywords: Daycare Surgery, Karnali Province, Minor Surgery, Nepal

INTRODUCTION

Daycare surgery involves admitting a patient for a planned investigation or operation. The patient does not stay overnight but still needs recovery facilities.¹

The notion of daycare surgery dates back to Dr. Nicoll, a surgeon and founder of modern Ambulatory surgery.² He described a 10-year surgical experience at the outpatient clinic in the Glasgow Hospital. His experience has gained global acceptance. During the last two decades, many countries have experienced a spectacular change from inpatient to daycare surgery. Currently, daycare surgery is the norm rather than the exception.³ Daycare surgery has been well-established in developed countries but is still in its early stage in developing countries.⁴ Daycare surgery was started as money-saving modality. However, innovations in surgery and anesthesia, along with positive patient feedback, have made it more popular in the last decade.⁵ There is immense opportunity for expanding daycare surgery in Nepal to ensure faster, safer, cost-effective, and patient turnover. This study aims at the finding the pattern of daycare surgery that is undergone in the rural tertiary care center of Nepal.

METHOD

The retrospective study was done at the rural community-based Karnali Teaching Hospital, Jumla, at an altitude above 2500 meters from sea level. The Karnali Academy of Health Sciences institutional review committee approved the study with the reference number 080/081/37. The Data were retrieved from the Hospital record section. The study period was from Jul 17, 2021 to Jul 16, 2023. All the minor surgeries done in the operation theatre from the time of the study were included for analysis. Minor surgeries on an emergency basis and inpatient and outpatient procedure rooms are excluded as the medical record section had no precise data.

The study used a consecutive sampling method. The study included all the patients who presented to the surgery department and planned for the daycare surgeries. The study variables were age group, anaesthesia used, and type of surgery. All the data were entered in Microsoft Excel and analysed.

RESULT

A total of 580 daycare surgeries were performed during two years, from 17 July 2021 to 16 July 2023, in the Department of Surgery, Karnali Teaching Hospital, Jumla. During that period, total surgery in the Department of Surgery was 1002. The daycare surgery was 580(57.5%) of the total surgeries in the Department. Males were 340 (56.5%) and females 240 (43.5%) in the day care surgery during that period.

Age group distribution showed that the active groups of

populations came to 232(40%) for daycare surgery, i.e., 21 to 40 years of age groups (Table 1).

Table 1. Age distribution of patient undergoing daycare surgery

Age-groups	f (%)
<20 years	203(35%)
21-40 years	232(40%)
41-60 years	87(15%)
>60 years	58(10%)
TOTAL	580(100%)

Among daycare surgeries, 348(60%) were done under Local Anesthesia, and 232(40%) were done under intravenous anaesthesia. Among the study participants 560 (96.5%) patients were ASA Class 1 (American Society of Anesthesiologists), and 20(3.5%) patients were ASA Class 2.

Table 2. Method of anaesthesia among the patients who have undergone daycare surgery

Method of Anesthesia	f (%)
Local Anesthesia	348(60%)
Intravenous Anesthesia	232(40%)
TOTAL	580(100%)

Among daycare surgery, incision and drainage were done in 155(26.5%) patients, and Excision of the lump (Sebaceous cyst/Lipoma/Dermoid cyst/Corn) was done in 150(25.5%) patients. Non-scalpel vasectomy was done in 120(20.5%) patients, i.e., the top three-daycare surgeries in our study. In other minor daycare surgeries, such as hydrocele, adult hernia under LA as shown in table 3.

Table 3. Types of cases that presented for daycare surgery

Main Daycare Surgery	f (%)
Incision & Drainage	155(26.5%)
Excision of lump	150(25.5%)
NSV	120(20.5%)
Foreign Body	65(11.5%)
Debridement	33(6%)
Cut Injury	25(4.5%)
Others	32(5.5%)
TOTAL	580(100%)

Only 26(4%) of daycare surgery patients were admitted to the surgery ward due to post-operative complications and managed accordingly.

DISCUSSION

The success of daycare surgery depends on several factors, including patient selection, proper anesthetic care, and the professional skills of surgeons.⁸ Thompson et al. treated 2039 patients in daycare surgery, and of those, 105 (5%) required in-patient admission. In this study, 26 (4%) required admission.¹³

Kala, et al. mentioned that Hemorrhoidectomy, Gastroscopy binding, and Hernia Surgery were the Top three-day care

surgeries.⁶ They also mentioned that office procedures, such as removing lumps, piles-sclerotherapy, and abscess drainage, were among the top three surgical procedures. In our study, drainage of abscess, excision of lump, and vasectomy were the top three-day care surgeries.⁶

In our study, most day surgery was done under local Anesthesia, i.e., 248(60%) Daycare surgery needs the highest standard of professional skill and organization. Although the operation could be Minor, anesthesia is never minor. Daycare surgery's success depends on several relevant factors, including patient selection, patient information, pre-operative assessment/test, proper anesthetic and post-operative care, patient acceptability, and audit.⁸ The most crucial criterion for patient selection for daycare surgery was the approximate duration of surgery. Next of importance is clinical status, comorbidities, and surgery for up to two hours.⁸ Mulchadani and Begani from Bombay Hospital performed 4506 surgical procedures, 3998 Outpatient Department(OPD) Procedures, and 1393 endoscopic procedures during ten years.¹⁷ They reported that daycare surgery is a safe, effective means of economic and fast-track surgery.¹⁷

The popularity of daycare surgery continued to grow, with a more significant patient number, lower staff, surgical cost, and more personalized care. In recent studies, ambulatory surgery has been considered safe, with rare significant morbidities and seldom re-admission requirements. Overall, patient satisfaction is high. The main cause of readmission or delay after daycare surgery has been nausea, vomiting, or uncontrolled pain. This study was performed among the patients who underwent daycare surgeries under the department of surgery only. If more cases from other departments were included in the study, that would give a more precise picture of the daycare surgery. Since daycare surgeries are of low time-consuming and have a low need for intravenous anaesthetic agents, these surgeries are safe and have a low economic burden to the patient. Similarly, it has a low chance of morbidity for the patient, so in the low-resource setting, if possible, these types of surgeries have to be practised.

CONCLUSION

Daycare surgery is rapidly emerging as a field of surgery in different specialities. It reduces the cost and mental agony of patients and family members. We should strengthen daycare surgery as much as possible. Popularized daycare surgery can reduce the lack of hospital beds and long waiting lists for operations. In Remote areas like Jumla, people are poor, and for them, daycare surgery is patient-friendly; we should improve our daycare surgery as early as possible.

DECLARATIONS

Acknowledgement

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Conflict of Interest

None

Funding

None

Ethical Clearance

Ethical clearance was taken from the Karnali Academy of Health Sciences -Institution review committee.

Consent of the Study

Since it was a retrospective study, no consent was taken from the patient.

Consent for Publication from Authors

All the author/s and participants consented to the publication of the findings.

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