

## Paediatric Inguinal Herniotomy and Open Orchidopexy as a Day Care Surgery in a Tertiary Care Institute

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### Abstract

*Objective:* To study the feasibility and outcome of day care paediatric inguinal herniotomy and open orchidopexy surgery. *Methodology:* This retrospective study was conducted in Chirayu Medical College hospital of Bhopal from 01-01-2012 to 01-01-2016. Male and female paediatric patients (n=100) who underwent inguinal herniotomy and orchidopexy were studied. The data was recorded and analyzed in Microsoft Excel 2007. *Results:* The mean age of the patients was 21.32±5.12 months. Out of 100 patients, 70(70%) underwent herniotomy and 30 (30%) patients underwent orchidopexy. Out of the 100 patients operated, 82(82%) were discharged on the same day whereas 18(18%) patients were discharged on the next day. Out of 70 patients with herniotomy, 56 (80%) were discharged the same day whereas 14 (20%) were discharged the next day. Out of 30 patients with orchidopexy, 26 (86.6%) were discharged the same day and 4(13.4%) were discharged next day. Immediate Post operative problems (18 pts) leading to delay in discharge was due to pain, nausea, vomiting, urinary retention, headache, drowsiness and local swelling. No complications were reported on 4 weeks follow up. *Conclusion:* Day case herniotomy and orchidopexy in a paediatric population is safe with minimal complications in the immediate post-operative period and should be recommended in developing countries with high volume surgical load.

**Keywords:** Paediatric Herniotomy; Orchidopexy; Day Case Surgery.

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### Introduction

The earliest reference for day care surgery is mentioned as early as the beginning of the 20th Century by James Nicoll, a Glasgow surgeon who performed almost 9000 outpatient operations in children in 1903. Later, in 1912, Ralph Waters from Iowa, USA, described "The Down Town Anaesthesia Clinic", where he gave anaesthesia for minor outpatient surgery. The global economic constraints and increasing financial awareness of the 1970s led to the increase in day care surgery [1]. Recent advances in medical technology and pain management have allowed a huge expansion of day care surgery with a consequent reduction in the need for hospitalization. The convenience and low overhead costs continue to attract more surgeries to be conducted in a day care setting. Approximately 70% of surgeries performed by paediatric surgeons can be conducted in Day Care setting. Recent surgical practices have seen an evolving paradigm shift in patient admission policy, pre-operative, per-operative and post-operative evaluation of patients admitted for day-case and short stay surgeries [1,2,3]. A "surgical day case" is a patient who is hospitalized for investigations or surgery on a planned, non-resident basis and who needs facilities for recovery from anaesthesia. Minor cases performed under local anaesthesia and not requiring an inpatient bed are not included in this definition; there are no concrete guidelines available for practicing surgeons in developing countries like Pakistan and India, except for isolated reports of day case surgeries being performed [4,5]. Children are excellent candidates for day care surgery as it provides minimal separation from parents and minimal exposure to hospital environment, hospital-acquired infection and is cost effective as well.

## Methodology

This retrospective study was carried out in a Medical college hospital in Bhopal from 01-01-2012 to 30-12-2016 where 100 male paediatric patients who underwent day case herniotomy or orchidopexy were selected. The patient's demographic characteristics, surgical procedure were recorded in a standardized form and analyzed. A full time consultant Paediatric surgeon examined all 100 patients enrolled in the study, evaluated them. An informed consent was taken from the guardians/ parents of the patients. All patients were admitted investigated, kept nil by mouth for six hours before the operation, operated kept in recovery room in operation theater and discharged on the same day. Before being discharged, full recovery from general anaesthesia was ensured, patient was mobilized early and intake of fluids, semi-solids was encouraged. All patients were followed up for 4 weeks for any complications.

## Results

The mean age of the patients was 21.32±5.12 months. Out of the 100 patients operated, 82(82%) were discharged on the same day whereas 18(18%) patients were discharged on the next day. Out of 70 patients with herniotomy, 56 (80%) were discharged the same day whereas 14 (20%) were discharged the next day.

Out of 30 patients with orchidopexy, 26 (86.6%) were discharged the same day and 4 (13.4%) were discharged next day. Immediate Post operative problems (18 pts) leading to delay in discharge was due to pain, nausea, vomiting, urinary retention and headache.

No complications were reported on 4 weeks follow up. No mortality was recorded and none of the patients reported for readmission due to any major post-operative complaints and or complications.

**Table 1:** Occupations of parents of patients of pediatric day case surgery

Occupation	N	Percentage (%)
Government and Civil servants	48	48
Self-employed	20	20
defence personnel	20	20
labourers	07	07
others	05	05
Total	100	100

**Table 2:** Age wise distribution of patients Age (years)

Age in years	Number of patients	Percentage (%)
6months- 2 years	25	25
2yrs -4 yrs	30	30
4yrs -6 yrs	28	28
6yrs -8 yrs.	17	17
Total	100	100

**Table 3:** Reasons of night stay in the hospital (n=18 out of 100)

Reasons	No. of Patients	Percentage (%)
Pain	6	6
Nausea and vomiting	4	4
urinary retention	3	3
headache and drowsiness	3	3
local swelling and discomfort	2	2

## Discussion

In paediatric surgery practise herniotomy and orchidopexy are the two most common paediatric procedures, performed. Advanced, safe and expert administration of anaesthesia is a major factor in the safety and success of day care surgery. Several studies have shown the safety and efficacy of day care anaesthesia and surgery in pediatric patients [6,7]. In

day care surgery reduced costs, improved hospital staff utilization early ambulation, lesser infections, decreased separation anxiety and attendants' agonies are advantages [5]. In our study, most of the operative procedures were completed in 30 -40 min which is seen in other series as well [8]. Of the 100 patients who were operated as day case herniotomy and orchidopexy, 82 were discharged on the same day after ensuring full recovery from general anaesthesia and early mobilization. 18 patients had to stay for one

night in the hospital with minor ailments. Clear and sufficient information provided to patients in day-care surgery is of great importance due to the short period of time at the hospital. Parents who receive information and instruction about their children's medical care are better prepared and assume a greater share of their care [9,10]. Pota AQD et al study included 350 patients who underwent various procedures including herniotomy and orchidopexy as day case surgeries with similar results and minimal complications [11]. Melone JH in his series of hernia in premature infants has noted minimal complications similar to our series [12]. Ruckley CV in his series concluded that increased day surgery will help reduce the waiting period. The selection of suitable patients and operation, proper parent's education and good communication with general practitioners is the cornerstone of good day care surgical practice. A further advantage of day case surgery is the supposition that these children will not display behavioral disturbances, in contrast to those children who are hospitalized longer [13]. Significantly less psychological disturbance is reported in children undergoing day-case surgery compared with children admitted on the day before and discharged on the day after surgery. Overnight stay in hospital may frequently be associated with separation of children from parents which is distressing and disturbing to both [14,15,16]. The male members resumed their office next day and females were able to carry on with their daily routine work. Hence day care surgery should be recommended in developing countries on regular basis. However, future prospective studies are required to assess the monetary aspect of these procedures.

### Conclusion

From our data, we conclude that day case uncomplicated herniotomy and orchidopexy surgery in a paediatric population is safe. Increased day surgery will help reduce the waiting period and free more inpatient beds with minimal complications in the post-operative period.

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