

# AN EXPERIENCE OF DAY CASE HERNIOTOMY AND ORCHIDOPEXY IN A PRIVATE SURGICAL UNIT, DIR TIMERGERA

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## ABSTRACT

**OBJECTIVE:** To study the outcome of day case paediatric herniotomy and orchidopexy in a private surgical unit, in terms of early post-operative complications.

**METHODOLOGY:** This retrospective study was conducted in a private surgical setup in Dir, Timergera, Pakistan from 01-01-2011 to 30-12-2012. Male paediatric patients (n=160) who underwent herniotomy and/or orchidopexy were selected from patient information systems through manually maintained patient registers. The data was recorded and analyzed in Microsoft Excel 2007.

**RESULTS:** The mean age of the patients was  $25.35 \pm 4.84$  months. Out of 160 patients, 116 (72.5%) underwent herniotomy and 44 (27.5%) patients had orchidopexy plus herniotomy. Of the 160 operated, 127 (79.4%) were discharged on the same day whereas 33 (20.6%) patients were discharged the next morning as they were from far-flung area and could not reach their destinations on same day. Out of 166 patients with herniotomy, 96 (82.8%) were discharged the same day whereas 20 (17.2%) were discharged the next day. Out of 44 patients with orchidopexy, 31 (70.5%) were discharged the same day and 13 (29.5%) were discharged next day. No mortality or major complications were reported in the 3 weeks follow up. None of the patients reported for readmission in those three weeks.

**CONCLUSION:** Day case herniotomy and orchidopexy in a paediatric population is safe with minimal or no complications in the immediate post-operative period and should be recommended in developing countries on regular basis.

**KEY WORDS:** Paediatric herniotomy, Paediatric Orchidopexy, Day Case Surgery.

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## INTRODUCTION

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. Major developments have occurred in the past two decades in day-case surgeries in developing countries. Day case surgery has served to reduce hospital costs while maintaining an excellent quality of health care provided to the patient.<sup>1,2</sup>

While countries like UK aim to carry out 75% of elective surgery to be performed as day cases<sup>3,4</sup>, the nationally reported data are limited to 25 procedures only.<sup>5</sup> Torbay Hospital carries out about 65% of its surgical procedures as day procedures.<sup>3</sup> With the increasing acceptance of day case surgery among patients and their attendants, many day case surgery centers with fully equipped recovery areas have opened up in the developed countries that specifically cater to this group of patients only. The decision to opt for day care surgery is influenced by coexisting diseases, the nature of the proposed surgery, the availability of a suitable escort and transport home, and domiciliary care.<sup>6</sup>

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.<sup>7</sup> Currently it is recommended that the day case surgeries should preferably be performed by a senior attending surgeon or a consultant.<sup>8</sup>

Although, several reports are available from developed countries with well-established norms for day case surgery with rigorously monitored outcomes<sup>2</sup>; 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.<sup>2,9-13</sup> Major resource variation and inequity in healthcare is another factor that has adversely affected the propagation and acceptance of day case surgery in our population.

In a country like Pakistan, where there are no surgical departments specific for day case surgery and a proper recovery room where the patients intended for day case surgery can be monitored, this study was conducted to observe the outcome of day case paediatric herniotomy and orchidopexy in a private surgical unit, in terms of early post-operative complications.

## METHODOLOGY

This retrospective study was carried out in a private surgical setup in Dir, Timergara, Pakistan from 01-01-2011 to 30-12-2012 where 160 male paediatric patients who underwent day case herniotomy and/or orchidopexy were selected from patient information systems through manually maintained patient registers. The patient's demographic characteristics, surgical procedure and/or any complication were recorded in a standardized form and analyzed through MS Excel 2007.

Since no specific guidelines and/or protocols exist for day case herniotomy and/or orchidopexy, patients were carefully selected for day care surgery. A consultant surgeon examined all 160 patients enrolled in the study, evaluated them and ensured that they are suitable for day case surgery. An informed consent was taken from the guardians/parents of the patients and their identity was kept anonymous. All patients were treated as outpatient cases, investigated on the same day of presentation, kept nil by mouth for four hours before the operation, operated 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 3 weeks for any complications.

## RESULTS

One hundred and sixty male patients between the ages of 16 months to 40 months were included in this retrospective study. The mean age was  $25.35 \pm 4.84$  months.

Out of 160 patients, 116 (72.5%) underwent herniotomy and 44 (27.5%) patients had orchidopexy plus herniotomy. Of the 160 operated, 127 (79.4%) were discharged on the same day whereas 33 (20.6%) patients remained in the hospital overnight and were discharged the next morning. These patients belonged to far-flung and remote areas; hence, they were unable to leave the hospital on the evening of the operation. Faulty transportation and unsafe territory made it impossible as well. None of the patients stayed in the hospital due to a complication.

Out of 166 patients with herniotomy, 96 (82.8%) were discharged the same day whereas 20 (17.2%) were discharged the next day.

Out of 44 patients with orchidopexy, 31 (70.5%) were discharged the same day and 13 (29.5%) were discharged next day with post-op advice and follow up scheduled for recovery and any complication.

No complications were reported in all 160 cases performed during the 3 weeks follow up. No mortality was recorded and none of the patients reported for readmission in the immediate post-operation period (3 weeks follow up). None of the patients reported for readmission due to any major post-operative complaints and/or complications.

## DISCUSSION

Herniotomy and orchidopexy, the two most common paediatric procedures, are performed as regular day cases. Advanced and expert administration of anaesthesia is a major factor in the safety and success of day care surgery.<sup>14,15</sup> Reduced costs, improved hospital staff utilization and beds,<sup>16</sup> early ambulation,<sup>17</sup> lesser nosocomial infections, decreased separation anxiety<sup>18</sup> and attendants' agonies are obvious advantages. The mean time that the patient takes from being diagnosed by the surgeon to the procedure being done is four days in a private setup. Government hospitals take

longer due to longer operation waiting lists. Data from western world cannot be extrapolated to developing world because of clear, inevitable differences in health care quality, lack of insurance policies, and the necessary infrastructure required to carry out these procedures as day cases.<sup>9,10</sup>

In Pakistan; day case surgery, although being the most economic models in current health system,<sup>2</sup> is a newer concept and the facilities required to carry them out are next to nil; and due to the dearth of safe guidelines<sup>2</sup> these procedures are done on an in-patient basis.

Of the 160 patients who were operated as day case herniotomy and/or orchidopexy, 127 were discharged on the same day after ensuring full recovery from general anaesthesia and early mobilization. Thirty three patients had to stay one night in the hospital and the most common reason was the unavailability of an escort since Dir, Timergara is a mountainous terrain and people come from far off villages to be operated in the center.

Pota AQD et al<sup>11</sup> in their commentary on day case surgery has deemed it favourable in selected cases at secondary care hospital level. Their study included 350 patients who underwent various procedures including herniotomy and orchidopexy as day case surgeries. Amjad N et al<sup>12</sup> in their study have also demonstrated that day case surgery is safe in certain procedures given that the patients are chosen carefully and followed up properly.

Notwithstanding, our results suggest that herniotomy and orchidopexy should be performed as regular day cases and incorporated into the current resident in-patient surgeries. However, an important factor is the careful pre-selection of patients suitable for these procedures. Another factor is the acceptability of these procedures to the attendants hence they should be allowed to make a fully informed decision before proceeding with the surgery.

Like various other studies<sup>2,3,7,9-13,16</sup> this small series also suggests that as these procedures are extremely common and performed almost daily, they be done on a day case basis, it will result in significant lowering of both hospital and patient's personal budgets. Further prospective studies focusing on the financial implications of day case herniotomy and orchidopexy need to be undertaken to fully evaluate the consequences adequately

Herniotomy and orchidopexy performed as day case cases will also result in reduction of in-patient hospital operation waiting-lists. Furthermore, the extremely heavy patient load in our hospitals mandates that these procedures if performed as day case surgeries will also result in better bed availability for patients who really do need admission.

## CONCLUSION

From our data, we conclude that day case uncomplicated herniotomy and orchidopexy in a paediatric population is safe with minimal or no complications in the immediate post-operative period and should be recommended in developing countries on regular basis.

These procedures, as day case surgeries, will result in significant reduction in hospital waiting lists, in-patient bed availability as well as hospital and patient's personal expenditures. However, further prospective studies are required to assess

the monetary impact of these procedures performed as day cases.

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## AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

- AUR:** Conception and design, acquisition of data, drafting the manuscript, final approval of the version to be published  
**KA:** analysis of data, critical revision, final approval of the version to be published  
**BR:** drafting the manuscript, final approval of the version to be published

*Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.*