

**BRIEF COMMUNICATION****Paediatric day care surgery at the Korle-Bu Teaching Hospital, Accra, Ghana**

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**Key words:** Daycare surgery, paediatric surgery, inhalational anaesthesia, parental satisfaction**SUMMARY**

This paper documents an example of successful daycare surgery in a developing country. We report the prospective experience of paediatric daycare surgery from a paediatric surgery unit of a teaching hospital in an urban centre of a developing country and assess the degree of parental satisfaction of the procedure. The literature regarding daycare surgery for children has mainly come from developed countries where daycare is well established, especially in many sub-specialties such as otorhinolaryngology. Examples from developing countries are few although the potential for provision of service to larger groups of children is understated in developing countries in particular. A questionnaire was developed and administered to the parents of patients undergoing daycare surgery under general anaesthesia over the six-month period in our unit.

**INTRODUCTION**

Since the 1980s daycare surgery has become an accepted practice for many procedures in paediatric surgery. The literature has examples from developed countries where daycare surgery is well established, initially in subspecialties such as otorhinolaryngology (ENT). There are few documented examples from developing countries. The potential for the provision of service to larger groups of children by this method is understated especially in developing countries where funds are at a premium and resources are scarce.

This paper reports on six months experience of a paediatric surgery unit of a teaching hospital in an urban centre in a developing country. The paediatric surgery unit of the Korle-Bu Teaching Hospital has been using day care surgery for many procedures since the 1970s. This is a prospective review of cases and outcomes as part of an audit process. This study is ongoing but the results discussed here are for the initial six-month period of the study.

**MATERIALS AND METHODS**

All patients undergoing daycare surgery under general anaesthesia over the six-month period were included

in the study. Informed consent was obtained from parents who agreed to have their children participate in the study. A questionnaire was developed and administered to the parents of patients by residents or house officers on the paediatric surgery team.

On the day of surgery, all children were allowed one bottle of Sprite or 250mls of Kalyppo (a clear flavoured sugar drink) at 6 am and then reported to the ward by 7am for surgery.

All surgery was carried out using general anaesthesia without intubation. Intra-operative analgesia administered was recorded and repeat random blood sugars were also taken on the ward prior to discharge home. On discharge home, all patients were given two doses of paracetamol suppositories with the option to administer more as required.

At the initial review four days postoperatively, parents were asked specific questions relating to postoperative pain, occurrence of vomiting, the activity of the child postoperatively, their satisfaction with the procedure and their responses noted. The wound was then inspected and the parents' overall impression of the whole surgical process was recorded

The results were collated and analysed using the SPSS statistical package (version 13.0) using descriptive analysis of sex, age, weight, surgical pathology using diagnosis, duration of anaesthesia and postoperative complications as noted by parents at the initial review.

**RESULTS**

Seventy-one patients were enrolled in the study during this period. Fifteen (21.1%) were female and 56 (78.9%) were male. Their ages ranged from 3 weeks to 13 years, with weight ranging from 2.4kg to 50kg (mean 18.4kg). The commonest diagnosis was right inguinal hernia (18), followed by a left inguinal hernia (11), undescended testes (7), right hydrocele (6), bilateral undescended testes and umbilical hernia (5 each).

The duration of anaesthesia was from 10 to 130 minutes, with inhalational anaesthesia without

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intubation used in all cases. For analgesia, 64 patients (90.1%) had additional local analgesia consisting of 0.25% plain bupivacaine infiltrated in the wound. Forty-one patients (57.8%) had paracetamol suppositories and one patient (1.4%) was given pethidine. Patients were discharged from hospital within four hours of surgery; the criterion for full recovery was tolerance of a clear fluid drink.

The parents of 60 patients (84.5%) reported that their child had not vomited in the postoperative period with 11 (15.5%) parents confirming that some vomiting had occurred. In all cases this occurred once and did not require any intervention. In 56 patients (78.9%), no further analgesia was required at home. Fifty-six parents (78.9%) stated that the activity of their child postoperatively was normal, with little indication that any surgery had occurred. Fifteen parents (21.1%) reported that the child's activity had decreased in the postoperative period for up to two days. In 66 patients (93%), the wound was clean and dry at initial inspection. The wound was moist in 3 patients (4.2%). There was no record of the wound findings in 2 patients.

Sixty-nine parents (97.1%) indicated absolute satisfaction with the entire surgical process, with only 2 parents expressing some reservations due to their own anxieties. There were no unplanned admissions to hospital in this series.

## DISCUSSION

In line with the findings of Desjardins et al that premedication offers no added advantage in giving children undergoing daycare surgery,<sup>1</sup> the patients in this series were not given any premedication. The majority of the patients (60 out of 71, 84.5%) did not experience any vomiting in the postoperative period suggesting that the mode of anaesthesia given in our unit is suitable for daycare surgery. This series confirms the findings of other studies that have suggested that nausea and vomiting are less of a problem postoperatively than pain.<sup>2</sup>

Parents are capable of assessing pain in young children as well as independent assessors.<sup>3</sup> In this study, 79% of parents felt that their children did not require any further analgesia after discharge, implying that intraoperative analgesia with local infiltration of 0.25% plain bupivacaine in the wound, together with preoperative insertion of paracetamol suppositories (25mg.kg<sup>-1</sup>) offered satisfactory postoperative analgesia. This figure is comparable to those of a previous study, where 75% of parents expressed satisfaction with postoperative analgesia.<sup>4</sup> Use of infiltrated bupivacaine alone has been shown in a previous study to provide adequate postoperative analgesia.<sup>5</sup> This is in contrast to other studies that have recommended

use of intraoperative fentanyl or pentazocine,<sup>6</sup> and postoperative tramadol.<sup>7</sup>

Fifty-six (78.9%) of the patients experienced little limitation in their activity and had returned to normal within twenty-four hours of surgery. This indicates the suitability of these patients to daycare surgery. Since the majority of patients (93%) showed good wound healing with no signs of wound infection, it is likely that parents understood and followed the instructions given to them about wound care. This finding is confirmed in other studies.<sup>2,4,8,9</sup>

## CONCLUSION

The study confirms that daycare surgery is eminently practicable for the purposes of most daycare paediatric surgery and that parental satisfaction is very high at the Korle-Bu Teaching Hospital, an urban centre in a developing country. There is scope in this setting to widen the variety of specialties involved and procedures performed as day cases. This will enable a large number of children to have surgery in the face of the current shortages of nurses and hospital beds.

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