ONE-STOP-SURGERY: AN EFFICIENT AND EFFECTIVE INNOVATION IN PEDIATRIC INGUINAL HERNIA REPAIR

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Aim: One-stop-surgery allows for same-day outpatient clinic visit, preoperative assessment and surgical repair; however, it is not or rarely done in children. This study assessed the efficacy, satisfaction and cost-effectiveness of one-stop paediatric inguinal hernia surgery.

Methods: A prospective comparative study was performed in patients (aged 3 months-18 years, ASA I-II) with inguinal hernia diagnosed by general practitioner or paediatrician, and eligible for regular day-care surgery. Consecutive patients referred between 1/5/2017-1/11/2018 were screened and, if willing to participate, scheduled for one-stop-surgery (intervention). Patients scheduled for regular treatment were included in the control group. Parent-reported satisfaction and cost-effectiveness were evaluated using the PedsQL Healthcare Satisfaction (divided into six different categories) and Productivity Cost Questionnaire (*i*PCQ).

Main results: Ninety-one patients (intervention n=54, control n=37) were included. Following one-stop-surgery, 53 patients (98.1%)(median [IQR] age: 5 [3-6] years) were first seen at our outpatient clinic and discharged at the same day. Post-operative complication rates were equivalent in the intervention and control group (1.9% vs 2.7%, p=1.000). General satisfaction (median [IQR])(87.5 [81.3-100] vs 81.3 [73.4-89.1], p=0.007), and also satisfaction regarding communication, inclusion of family and technical skills was higher after one-stop-surgery. Satisfaction about information and emotional needs were equal between the groups. Median [IQR] number of hospital visits was reduced in the intervention group (1[1-1] vs 3[2-3], p<0.001), leading to a decrease in healthcare costs.

Conclusions: One-stop inguinal hernia repair in children is safe and feasible. One-stop-surgery improves patient and family satisfaction, reduces the number of hospital visits and work absence and decreases direct healthcare costs.

Table 1. Results of the PedsQL Satisfaction Questionnaire divided by the six categories (general satisfaction, information, inclusion of family, communication, technical skills, emotional needs).

Category	OSS (n=45) *Median (IQR)*	Control (n=26) *Median (IQR)*	p-value
General satisfaction	87.5 (81.3-100)	81.3 (73.4-89.1)	0.007
Information	81.3 (71.9-100)	75 (68.8-81.3)	0.113
Inclusion of family	91.7 (75-100)	75 (75-83.3)	0.002
Communication	88.9 (75-100)	75 (67.9-78.5)	0.001
Technical skills	91.7 (75-100)	75 (75-83.3)	0.021
Emotional needs	81.3 (75-100)	75 (73.4-82.8)	0.076

Abbreviations: OSS, one-stop-shop; IQR, interquartile range