

## A rare self-mutilating post-operative behavioral change in a 3-year-old child

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### ABSTRACT

General anesthesia or sedation is mandatory even for minor surgery in children especially if they are below 5 years of age for oblivion. It's mandatory not only for intraoperative period but also to omit the psychological impact that may adversely affect the children postoperatively. We report a case of post-operative behavioral change where a 3-year-old child applied a straight incision over his forehead to mimic the surgery that he learnt intraoperatively while drainage of small abscess of his own great toe carried out on him without anesthesia or sedation.

**Key words:** Behavioural change, Postoperative, Self-mutilating

General anesthesia or sedation is mandatory even for minor surgery in children especially if they are below 5 years of age for oblivion. It's mandatory not only for intraoperative period but also to omit the psychological impact that may adversely affect the children postoperatively. We report a case of post-operative behavioral change where a 3-year-old child applied a straight incision over his forehead to mimic the surgery that he learnt intraoperatively while drainage of small abscess of his own great toe carried out on him without anesthesia or sedation.

### CASE REPORT

A 3-year-old male child presented with small painful swelling of the right great toe for 3 days. Parents of the child noticed that initially the swelling was very small but its size increased gradually along with the appearance of redness, pain and the child was unable to walk properly, more so while using his right lower limb. On the day of presentation, child also developed fever and clinically an abscess of great toe was diagnosed. The collected pus was visible in a thin flimsy skin with fully developed fluctuation; we planned to drain it under general anesthesia. But as the father of child was also surgeon, he preferred giving just one small incision over the abscess without giving anesthesia. Hence, one small incision (Hilton's method) was given and 10 ml of pus was drained out without giving anesthesia or sedation. The child was very cooperative during the intraoperative period as he gave the verbal consent on the condition that he will learn to operate and be allowed to see the operative step. After drainage, child was discharged. On the second post-operative day at home, he took one sharp

instrument and gave a straight incision over his forehead while standing in front of mirror and then started to cry. Bleeding was controlled by applying pressure bandage. On the next day, child accepted that he was trying to enact on himself, whatever he learnt at hospital.

### DISCUSSION

Post-operative behavioral changes in children who are operated without giving anesthesia/sedation include general anxiety, enuresis, night-time crying, post-traumatic stress disorder, fear of doctor, and hospital and temper tantrums. There is a paucity of case reports on post-operative behavior change in children who are <5 years of age. On the other hand, this particular post-operative behavior, i.e. giving incision on his forehead is probably the first case of its kind in the world in a 3-year-old child. The presentation becomes even worthy of clinical attention as face is an area rarely attempted to be disfigured even by non-psychotic mentally ill [1]. Kotiniemi et al. attributed in their study that such problematic behavioral change is most common in the 1.0-2.9 years old and the incidence decreased significantly from 46% on the day of surgery to 9% 4 weeks later ( $p < 0.0001$ ) [2]. Similarly, young children, between the ages of 1 and 5-year-old, are reported to be at the highest risk for developing significant anxiety before anesthesia and surgery suggested by Kain and Fortier [3,4]. Even if one is giving general anesthesia then also one must prefer the best drug which having lower post-operative behavioral change was suggested by Stipic et al. study [5]. In this age group, it is better to use the drugs which keep the patient awake without memory for surgery was suggested by Wang et al. [6]. Overnight stay at hospital on

the day of surgery decreases post-operative behavioral change as staying at home are associated with increased child negative outcomes was stated by Power [7]. Interestingly Kain et al. [8] in his study found that there was no significant difference in post-operative behavioral change in patients who received premedication sedatives.

## CONCLUSION

Post-operative behavioral change in children may present variably. Hence, it is essential that parents are actively counsel preoperatively in favor of promoting general anesthesia or sedation even for minor surgical interventions to alleviate the post-operative behavioral symptoms.

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