ONE-YEAR INCIDENCE OF MODERATE-TO-SEVERE CHRONIC PAIN FOLLOWING MAJOR PEDIATRIC SURGERY

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INTRODUCTION / AIM

Chronic post-surgical pain (CPSP) has been estimated to occur in approximately 50% of children after common surgical procedures and 22% have moderate-to-severe pain. Prolonged pain impairs quality of life, demands constant attention, and interferes with psychosocial functioning and school attendance. The purpose of this study was to determine the incidence of CPSP and pain disability 12 months after major pediatric surgery and to examine differences between surgical classes specialties.

METHODS

A prospective, longitudinal study was conducted to follow 147 patients [42.18% male; mean age=13.88 years (SD=2.72)] before surgery (T1) and 12 months after surgery (T2, n=113). Patients underwent osteotomy (36.73%, n=54), scoliosis (52.38%, n=77), Ravitch (4.08%, n=6), and other surgeries such as laparoscopic colectomy (6.12%, n=9). The average length of stay in hospital was 4.91 days (SD=2.11). Data on surgical type and length of stay in hospital were collected from medical charts. Children completed a 0-10 numeric rating scale (NRS) for pain severity, the Functional Disability InventoryChild Form (FDI), and qualitative questions on frequency and duration of pain and pain unpleasantness. Moderate-to-severe pain was defined as a score of e4 on the NRS."

RESULTS

There were no significant differences in pain intensity 12 months after surgery based on type of surgery, F(3,61) = 0.53, p = 0.662. Nearly 60% (n=66, 58.41%) of children had surgery related pain 12 months after the surgery and 36.28 % (n = 41) reported it as moderate-to-severe pain. The majority of children with moderate-to-severe pain (37.89%, n = 25) reported experiencing pain at least once per week. Children with moderate-to-severe pain had greater functional disability (M = 13.28, SD = 10.59) than those with mild pain (M=7.17, SD = 4.98), F(1,61) = 7.02, p=0.01. Similarly, they also reported greater pain unpleasantness scores, F(1,64) = 23.28, p<0.001.

DISCUSSION / CONCLUSIONS

The results of this study indicate that over a third of pediatric patients develop CPSP and have functional disability one year after major surgery. Future research is needed to identify the factors that predict this poor outcome. Identifying children who are at risk for CPSP will help to develop prevention strategies and post-surgical treatments.
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