

# The use of complementary therapy in managing pain in children undoing spinal fusion surgery

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## INTRODUCTION

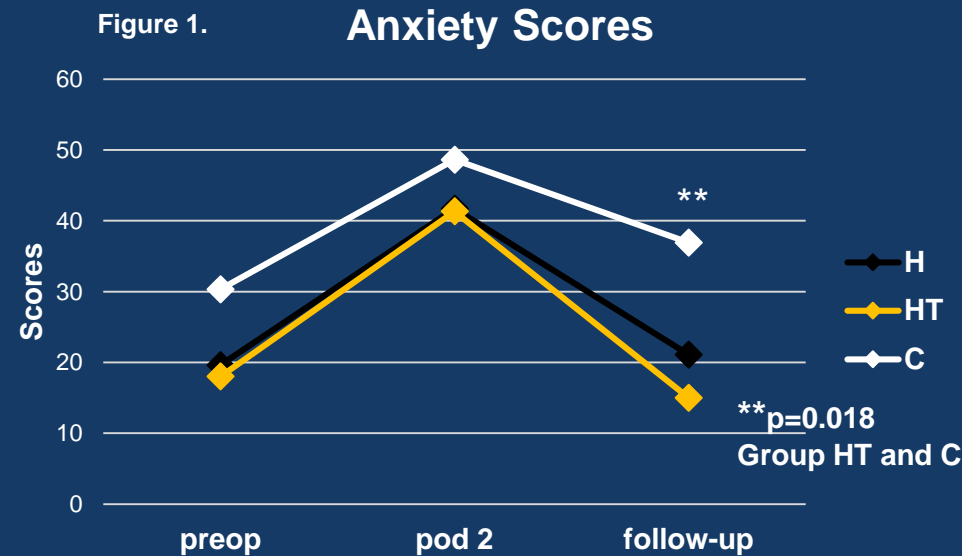
- Complementary and alternative medicine (CAM) is being used with increasing frequency for alleviation of periop anxiety and postop pain
- Overall, few randomized control trials have utilized CAM therapy as an additional treatment modality versus the standard of care. Additionally, in children undergoing surgery and experiencing acute postop pain, little information is available regarding the benefits of CAM therapy.
- In this prospective, randomized and controlled pilot study, our aim was to evaluate if two CAM modalities, Hypnosis (H) and Healing Touch (HT) provide any benefit in adolescents with idiopathic scoliosis (AIS) undergoing posterior spinal fusion (PSF) surgery

## METHODS

- Following IRB approval and parental or patient consent, **30 patients** undergoing PSF for AIS were recruited and randomly assigned to one of three groups of **10 patients each**:
  - ❖ **Group C:** Standard pain management
  - ❖ **Group H:** Hypnosis intervention + Standard pain management
  - ❖ **Group HT:** Healing Touch intervention + Standard pain management
- All patients received standard pain management (group C) as per our protocol: Periop gabapentin, postop morphine PCA, transdermal clonidine, ketorolac and diazepam.
- In addition, groups H received a Hypnosis intervention and group HT received a Healing Touch intervention on the day of surgery and daily until discharge.
- All patients were evaluated for **opioid use, pain scores (VAS), anxiety scores (Child Pain Anxiety Symptoms Scale - CPASS) and perioperative cortisol levels (on four occasions)**

## RESULTS

- Numeric data were analyzed using ANOVA with intergroup post hoc analysis done by Tukey's test. Nominal data was analyzed using chi square. The significance was assumed at P<0.05
- All three groups were demographically similar
- Pain scores and Opioid use:** There was **no difference** among groups
- Anxiety scores (CPASS):** Significant difference was observed in anxiety scores between group C and group HT at the final visit only (Figure 1)
- Cortisol levels** differences were observed between groups
  - ❖ Preoperative and intraoperative periods - No difference
  - ❖ Postoperative day two - group HT demonstrated lower cortisol level which returned to the same level as the other two groups at the time of follow up visit (Figure 2)



## CONCLUSIONS

- Due to a small sample size, we are unable to conclude if HT and H provide any benefit in the perioperative period over standard pain regimen. However, we observed a trend towards reduction in postoperative cortisol level in the HT group on postop day-2 and reduced anxiety on follow up visit.
- Further study using a larger sample size may be necessary

## REFERENCES

- Adams D et al. Complementary and alternative medicine use by pediatric specialty outpatients. Pediatrics. 2013
- Wobst AHK. Hypnosis and surgery: Past, present, and future. A & A. 2007

