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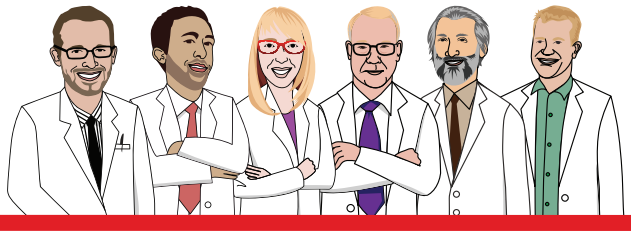

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The Effectiveness Of Distraction As Procedural Pain Management Technique In Pediatric Oncology Patients: A Meta-Analysis And Systematic Review

Bukola, I.M., et al, J Pain Sympt Manag 54(4):589, October 2017

BACKGROUND: Inadequate relief of procedural pain in children can have substantial long-term consequences. Several non-pharmacologic pain relief strategies have been proposed as adjuncts, or alternatives, to administration of analgesics.

METHODS: These authors from Nigeria and the UK performed a systematic review and meta-analysis of seven randomized trials including 312 pediatric cancer patients aged 2-19 that evaluated the effects of distraction techniques (e.g., books, games, music) versus standard care (e.g., local anesthetic or no intervention) during invasive painful procedures. Outcomes were self- and observer-reported and physiologic measures of pain.

RESULTS: Most children had leukemia and were undergoing needle insertion for port access or lumbar puncture. Pooled data for self-reported pain (four studies; 220 patients) showed that distraction significantly reduced pain (standardized mean difference [SMD] -0.64; 95% CI -1.10 to -0.17; p=0.007). Meta-analysis was not possible on observer-related pain reduction (three studies); a qualitative summary indicated conflicting findings (e.g., a significant reduction in pain according to nurses but not parents). Physiologic measures (three trials of pulse rate; 104 patients) reported a significantly lower pulse rate in the distraction group (SMD -0.87; 95% CI -1.28 to -0.47; p<0.001), with an average reduction of 8.9 beats per minute. Limitations include a high risk of study bias (e.g., inability to achieve blinding) and heterogeneity in the types of pain assessment scales used. Only the pulse-rate data were considered to be consistent with high-quality evidence.

CONCLUSIONS: Distraction may be an effective intervention to reduce pain due to invasive procedures in children.

59 references (*ibitoye.bm@unilorin.edu.ng* – no reprints)

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EDITOR'S COMMENTARY: ***This was a systematic review of 7 randomized controlled trials looking at distraction as a procedural pain management technique in pediatric oncology patients. The authors found a reduction in self-reported pain and pulse rates with distraction techniques (e.g., books, games, music). Distraction appears to be a promising intervention for management of procedural pain.***

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