



Not all sounds have negative effects on children undergoing cardiac surgery

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Abstract:

Objective This study was designed to evaluate the role of music therapy on the level of stress in children undergoing repair of congenital heart disease. **Design** Prospective, randomized double blind controlled clinical trial **Setting of the study** Children University Hospital **Patients** 50 children in the age of 4 to 12 years undergoing repair of congenital heart disease **Methods** Patients were randomized into two equal groups (control group and music group); in control group patients listened to a blank CD, while in music group patients listened to a recorded CD by music and songs preferred by the child. **Demographic data** clinical data and preoperative vital signs were recorded. A baseline stress markers (blood glucose and cortisol levels) were sampled. Patients were assessed intra-operatively till extubation for vital signs, stress markers and after extubation for pain and sedation scales. An interview conducted within the first postoperative week with the patients and their parents for assessment of posttraumatic stress disorder and negative postoperative behavior changes. **Measurements and Main Results** No significant difference in demographic, clinical data, vital signs, preoperative and at extubation blood glucose levels and preoperative blood cortisol level between both groups. Significant difference in blood glucose and cortisol levels at all intraoperative times, while only in cortisol blood level at extubation. Significant differences in pain score, sedation score, occurrence of child posttraumatic stress disorder and occurrence of negative postoperative behavior. **Conclusion** listening to favourable music in children undergoing repair for congenital heart disease resulted in less stress and more relaxation.

Keywords:

Children; Congenital heart disease; Music; Cortisol; Stress; Behavior

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