



Audio vs. Video as a Pacifier for Pediatric Echocardiography- A Randomized Controlled Trial

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To the Editor: Achieving child's co-operation is the first step in pediatric echocardiography. While swaddling/ breast-feeding easily soothes infants, sedation is indispensable in toddlers since it is challenging to achieve their co-operation. Ataxia, dizziness, obtundation and hyperactivity have been reported with pediatric sedation [1]. Waiting-period for the sedative to take effect and the need for monitoring post-echo, until child regains consciousness, adds to the cost and man-power burden on health-care resources. Non-pharmacologic alternatives to sedation, if effective, can enable safer, cheaper and faster pediatric echo.

Cartoons have been successful pacifiers obviating the need for sedation [2, 3]. But if doctors use cartoons, parents may follow suit to win child's cooperation at home adding to the burgeoning screen-time [4]. To evaluate if cartoons, minus visuals, (audio-component alone) are effective as stand-alone pacifiers for pediatric echo, ethics committee (JIP/IEC/2022/043) and clinical trials registry (CTRI/2022/09/045289) approvals were obtained. Toddlers (aged 2–5 y) requiring echocardiography preceding non-cardiac surgeries were randomised into group-1, audio-alone or group-2 audio plus video ($n=36$ in each group). Sedated-children and those with congenital heart diseases were excluded. A wall-mounted television played the same cartoon

(language varied based on child's mother tongue) in both the groups with or without video (group 2 and 1 respectively).

Non-inferiority was pre-defined as difference in procedural duration of <3 min between the two-arms. Study completeness score (SCS) (maximum of 6- based on the number of views-sub-xiphoid-2/PLAX/PSAX/A4C & A5C/Supra-sternal) and visual analogue scale (VAS) were used to describe study completeness and child's anxiety during echo respectively.

Mean duration of echocardiography [263 s vs. 240 s (p value 0.07)], average SCS (5.9 in both groups) and VAS [0.56 vs. 0.92 (p value 0.45)] were not statistically different between the two groups.

By pre-specified criteria, audio-group was non-inferior to the video+audio group. Cartoons' audio-content alone, in suitable languages, is an effective pacifier to achieve toddler-echocardiography.

Declarations

Conflict of Interest None.

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