Use of iPad® video games for distraction during parental separation and induction of anesthesia for pediatric surgery

Seiden S, Heddon C, McMullan S, Rosenblatt A, Suresh S
Lurie Children's Hospital, Chicago, IL, USA; Rush University, Chicago, IL, USA

Separation from parents and induction of anesthesia are major sources of fear and anxiety for parents and pediatric patients undergoing surgery and procedures. Many techniques are utilized for anxiolysis including premedication, distraction such as movies and video games (VG), modeling the surgical process with dolls etc, parental presence, and expertise of child life specialists. Recent introduction of tablet computing platforms such as the Apple iPad (Cupertino, CA) afford the advantage of an exceptionally portable platform for games as well as video. In addition, compared to previous studies of VG distraction during induction of anesthesia [Patel et al 2008], the iPad affords several innovative advantages: 1) the multitouch display allows for games from simple to complex, but that are generally intuitive; 2) the variety of "apps" provide active entertainment for children as young as infants and toddlers (even infants enjoy the Pocket Pond app which portrays a koi pond and allows them to make splashes in the water); 3) an exhaustive variety of low cost ever-changing apps are available insuring low chance of lack of interest. We will present experience that suggest iPad based VG decreases need for premedication with improved satisfaction of parents with separation as well as lower anxiety and agitation on induction of anesthesia as measured by modified Yale preoperative anxiety scores (Kain et al 1997). Experience to date suggests that compared to recent literature using videos [Lee et al 2012 and Mifflin et al 2012] for distraction of pediatric patients, games afford better anxiolysis and distraction due to the requirement of active participation compared to passive nature of movies and the like. Moreover, when children can voice a choice between games and videos they choose games. Specific applications that are appropriate for ages as young as 12 months through teenagers will be discussed. Concern that this effect is due to the novelty of these platforms seems unlikely as the benefit is seen in even toddler and pre-school age children who likely have little awareness that such tablet platforms are innovative. Experience with specific devices (iPhone/iPad/iPad mini) will be discussed as well as optimal timing for device introduction to maximize distraction benefit, seated (as opposed to supine) induction to allow game play, and device disinfection precautions.

References:


