Removing Pain In Children's Immunisations

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Introduction/Clinical Setting

Immunisations are one of the most common procedures for children in a primary health setting. Despite the proven benefit of immunisations, the pain related to these injections causes great anxiety and distress for children and parents (Schecter et al., 2007). Because immunisation in New Zealand depends upon the decision from the caregiver it is important nurses are aware of effective techniques to reduce pain during immunisation visits therefore improving the experience for both the caregiver and child (Pillitteri, 2013).

So the question is...

In children from 12 months to 5 years old, are distraction techniques or topical anaesthetics more effective in reducing pain during immunisations?'

Distraction Techniques

• Distraction is effective in decreasing children's pain responses during immunisations and is one of the most commonly used non pharmacologic approaches in paediatric pain management (Cramer-Berness, 2007).

• Distraction techniques include: movies, toys, kaleidoscopes, bubble blowing, short stories and music (Schecter et al., 2007).

• Parent lead distraction and allowing parents to hold/rock their child during the immunisation has shown to be effective (Blount, 1992).

• The child's age and cognitive maturity should be considered when selecting the distractor (Schecter et al., 2007).

Topical Anaesthetics

• EMLA cream contains lidocaine and prilocaine which numbs the surface area of the skin, hence reducing pain as the needle penetrates the skin (Schecter et al.,2007). It require 30-60 minutes for results to be effective (Taddio et al., 2007).

• Vapocoolant and ethyl chloride sprays numb the skin and may prevent the transmission of pain sensation. They require 20 seconds to reach effectiveness and have a duration of 30 seconds (Cohen & Holubkov, 1997).

(3 News, 2012)

Implications for Practice

Distraction

- Wide variety of techniques which are easy to use.
- May take time to engage the child in the distractor (DeMore & Cohen, 2005) but can make the procedure shorter due to less distress from the child, (Cohen, 2002).
- May add extra costs, although clinics can have a selection of affordable distractors on hand, such as toys, stories, or bubbles.

Topical Anaesthetics

- EMLA is inconvenient for clinics considering it takes 1 hour for optimal effects.
- EMLA is effective for reducing superficial pain but research is limited for its effectiveness in intramuscular immunisations (Cohen et al., 2006).
- Vapocoolant and ethyl chloride have immediate effects and are time and cost effective but may not be effective as the cold sensation of the spray can be perceived as painful for younger children (Cohen et al., 2009).

Recommendations/Conclusion

- Distraction should be a key intervention given its ease and cost effectiveness.
- Nurses should involve parents in the selection of the distractor as they know what will work best for their child.
- Nurses should encourage parent lead distraction and allow parents to engage their child in relaxing techniques as this combined with distraction has been proven effective (Blount, 1992).
- To effectively use EMLA cream nurses should educate parents to apply the cream prior to the immunisation.
- Sprays should be used on older children who can understand the purpose of the cold sensation.

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PECOT category	Information relating to question	Explanation
Population	Children 12 months to 6 years	This is the age children exhibit high distress towards immunisations. A younger child can be breastfed or bottle fed as the immunisation is carried out and as the child gets older they can be reasoned with.
Exposure	Children being immunised	I will be looking at articles where distraction and topical anaesthetics have been used as a pain management strategy during immunisations.
Comparison	Children who had distraction and/or topical anaesthetics used	I am interested to see if one strategy is better than the other.
Outcome	Is pain alleviated when either of these interventions are used	I want to see which technique works best to make immunisations more pleasant for the child.
Time	NA	

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