Case
Johnny was born preterm and is showing decreased sucking patterns. His parents would like to take Johnny home as soon as possible and want him to be feeding by mouth by then. The occupational therapist is wondering if using oral stimulation will increase oral feeding in Johnny to help him go home sooner.

Does oral stimulation promote sucking in premature infants?

Oral motor stimulation is commonly used in pediatric occupational therapy practice to promote oral motor skill development, but is it truly effective?

1 Ask: Research Question
   In preterm infants, what is the effect of an oral motor stimulation program on sucking behaviors compared to treatment as usual?

2a Acquire: Search Terms
   Patient/Client group: Pre-term infants
   Intervention: Oral motor stimulation
   Comparison: Treatment as usual
   Outcome(s): Sucking behaviors

2b Acquire: Selected Articles
   Poore et al. (2008): Matched case control design looking at the effects of the NTrainer oral stimulation system on non-nutritive suck and oral feeding in 31 preterm infants.
   Pimenta et al. (2008): Randomized control trial that examined length of stay and breast-feeding rate in preterm infants receiving sensorymotor-oral stimulation in comparison to preterm infants receiving treatment as usual.
   Neiva & Leone (2007): Randomized control trial that looked at 95 preterm infants in a longitudinal assessment of the effects of specific oral stimulation in comparison to no oral stimulation.

3b Appraise: Study Results
   Overall, three of the four studies suggest that oral motor stimulation promotes the development of oral skills in preterm infants. Various intervention strategies to provide oral motor stimulation were utilized, the most effective being the NTrainer program. Pimenta et al., (2008) showed a secondary outcome of breastfeeding. The study by Neiva and Leone (2007) showed insignificant differences between control and intervention groups for non-nutritive suck. Further research needs to be conducted to conclude the most effective mode of providing oral motor stimulation.

4 Apply: Conclusions for Practice
   The evidence found in this critical appraisal shows that oral motor stimulation can be effective in promoting non-nutritive suck along with other oral motor skills in preterm infants. The study designs are strong considering that two of the studies are randomized control trials. It is clear that this intervention can be effective, both for Johnny and current practice, with the NTrainer program showing promising results.

References

Reviewers:
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✔ Yes: Oral motor stimulation is effective for improved behaviors in preterm infants.