

RETINOPATHY OF PREMATURITY (ROP) Supporting information

This guideline has been prepared with reference to the following:

American Academy of Pediatrics (Section on Ophthalmology), American Association for Pediatric Ophthalmology and Strabismus, American Academy of Ophthalmology. Screening examination of premature infants for retinopathy of prematurity. *Pediatrics* 2013;131:189-195

<http://pediatrics.aappublications.org/content/131/1/189.full>

“Comfort care techniques” reduce pain and anxiety associated with screening for ROP?

A randomised controlled trial in 40 infants (O’Sullivan, 2010) used swaddling in the control group (n=20), who also received 0.2 ml of sterile water given by mouth using a syringe and a soother. The intervention group (n=20) were also swaddled, and received 0.2 ml of sucrose 24% given by mouth using a syringe and a soother. The sucrose group had a significantly lower median Neonatal Pain, Agitation and Sedation Scale (N-PASS) score during ROP screening, initially following insertion of the speculum (6.5 vs 5, p=0.02) and subsequently during scleral indentation (9.5 vs 7.5, p=0.03). Fewer infants experienced episodes of desaturations or bradycardia in the intervention group (1 vs 4, p=0.18).

A systematic review of 8 studies (Sun, 2010) grouped the results according to intervention: oral sucrose (group 1), anaesthetic eye drops (group 2) and non-pharmacological measures (group 3). Pain was assessed by Premature Infant Pain Profile (PIPP). For group 1, the mean PIPP score with sucrose was 1.38 (WMD) (95% CI: 0.41-2.35) lower than that of placebo (p = 0.005). For group 2, one study showed a reduction of two points on the PIPP score with topical proparacaine, whereas another showed no benefit. For group 3, developmental care improved developmental scores and salivary cortisol in one study. The authors concluded that sucrose reduced pain during the eye examination, whereas the efficacy of proparacaine was not consistent. PIPP scores remained relatively high in all the studies; further research was required to delineate better pain reduction strategies.

O’Sullivan A, O’Connor M, Brosnahan D, et al. Sweeten, soother and swaddle for retinopathy of prematurity screening: a randomised placebo controlled trial. *Arch Dis Child Fetal Neonat Ed* 2010;95:F419-22
<http://fn.bmj.com/content/95/6/F419.long>

Sun X, Lemyre B, Barrowman N, et al. Pain management during eye examinations for retinopathy of prematurity in preterm infants: a systematic review. *Acta Paediatr* 2010;99:329-34

Evidence Level: I

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