

Author's reply

Dear Editor,

We thank the authors for showing interest in our article.^[1] First of all it is not easy to assess pain in neonates as compared to adults. There is a Classification of Pain Expressions (COPE) developed by Brahnam *et al.*^[2] which is based on infants facial expression during procedures like heel lance, transport from one crib to another, air stimulus on the nose and friction on the external lateral surface of the heel. For retinopathy of prematurity (ROP) laser, putting a speculum and using a scleral depressor itself will cause some pain and change in facial expression. Thus even with this validated system, it would be

impossible to say if change in facial expression was from eye ball manipulation or laser induced.

It is known that any laser given under topical anesthesia is painful. It is not that our type of laser has converted a totally painless procedure to a painful one. Diode red laser, which is the current standard laser used for ROP, causes more pain compared to green laser because of its deeper penetration. Thus theoretically green laser would be better than red as far as pain is concerned. Both the conventional and large spot transpupillary thermotherapy (LS TTT) use the same standard diode laser. What is the difference in the pain caused by these two different modes of treatment and is it statistically significant to cause direct and long-term consequences on the neurological development of neonates, as the authors claim, is a difficult question to answer from our study. Only a randomized controlled trial with large numbers and long-term follow up can answer that and how meaningful would it be to use the validated pain scale depending on facial expressions during ROP laser is also highly questionable. Practically we found no difference as far as the tolerance by the baby was concerned. Infact we felt LS TTT to be less stressful for the baby by finishing the laser with 40% less time. Efficacy and safety wise it was no less compared to conventional laser procedure.

The authors point out that continuous mode laser leads to more damage to adjacent retinal tissue secondary to passive thermal diffusion beyond the target site. This is actually advantageous as it will ensure complete confluent ablation of the entire avascular retina, which is the ultimate goal in treating ROP laser. This can be added as another point in favor of this treatment over conventional laser. However overtreatment could be a possibility which we have already mentioned.

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