

## Abstract 201

### APPEARANCE OF NEW RETINAL HEMORRHAGES FOLLOWING RETINOPATHY OF PREMATURITY EXAMINATION

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#### **Introduction:**

Purpose: To document one of the complications of ROP examination occurring in 4 premature infants.

#### **Materials and methods:**

Method: Premature infants developing retinal hemorrhages just after ROP screening examination or widefield retinal image capturing in a university clinic are included into the study. Every infant was examined by a resident with indirect ophthalmoscopy and widefield fundus imaging with the help of an eye speculum and a scleral depressor before the examination of a retina specialist. New widefield fundus images were captured to record the new developing hemorrhages and they have been followed up conservatively. The demographics and ROP features as well as time to disappearance of retinal hemorrhages were recorded.

#### **Results:**

Results: Two male and two female infants born at a mean of  $32 \pm 3.13$  (26-34) weeks of postmenstrual age (PMA) and a mean birth weight (BW) of  $1598 \pm 521$  (915-2115) grams were included in the study. The mean PMA at the time of examination was  $47 \pm 5$  (40-52) weeks. All of the infants had avascular retina in zone 2 or 3 at the time of examination. None of the infants had retinal hemorrhages before and during ROP examination. They were noted to develop new retinal hemorrhages just after the examination which was noticed when they have been examined by an experienced ROP specialist. All four patients underwent either a scleral-depressed dilated fundus exam (in 2 patients) or RetCam photography (2 patients) shortly before the occurrence of hemorrhages. There were no comorbidities in three of the cases, however, one case had necrotizing enterocolitis and intracranial hemorrhage. None of the infants needed any treatment for ROP. Three patients had stage 0 and 1 patient had stage 1 ROP. Hemorrhages resolved completely in a median of 2 weeks (1-2weeks), without any noticeable ocular sequelae.

#### **Conclusions:**

Conclusions: It is important for ophthalmologists performing ROP screening examinations to be aware of the potential for retinal hemorrhages to occur as a result of scleral depression. However, it should be noted that these hemorrhages will resolve spontaneously. The main pathophysiologic factor is thought to be the sudden increase in the IOP with scleral depression followed by a large decrease by release, which is a type of ocular decompression retinopathy. It may be advisable to avoid violent scleral depressions and sudden releases during ROP examinations.