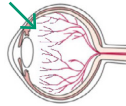
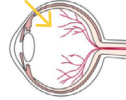


Vascular Development of the Retina

Complete vascular development
at expected date of birth (9th month)

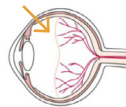


Incomplete vascular development
at premature birth

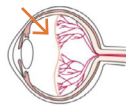


Stages of retinopathy of premature infants (ROP)

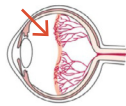
Stage 1:
Demarcation line



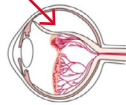
Stage 2:
Visible ridge



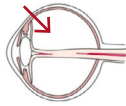
Stage 3:
Blood vessels in the ridge



Stage 4:
Sub-total retinal detachment



Stage 5:
Total retinal detachment



Plus disease:
dilated and tortuous vessels

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0178417_2024/05_eng_kfig/mz

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Augenheilkunde

Ophthalmic Examination of Newborn Babies



Ophthalmic Examination of Premature and Newborn Babies

Your child was born before the 32nd week of pregnancy and / or with a birth weight less than 1500 grams, or there are other reasons for an early initial eye examination (ventilation, other illness). Eye development in premature infants must be monitored closely, which is why this examination was initiated. It is important to recognize abnormal eye development early, as treatments are available that can often prevent blindness.

Development of the Retina

The development of the blood vessels of the retina takes place between the 4th and 9th month of pregnancy. It begins in the center of the retina and reaches the outer edge of the retina at the time of full term birth (the expected due date). Retinal development is not yet complete in premature infants. Instead of normal vascular development, premature infants may experience an incomplete blood supply to the retina and abnormal vascular formation, which is known as retinopathy of premature infants (ROP) (see figure).



Eye Examination

The pupils are dilated with eye drops to examine the retina at the fundus. This takes about 30 minutes. Anesthetic drops are given immediately before the examination so that the surface of the eye is numb.

The treating doctor examines the retina with a magnifying glass and a light source. To do this the eyelids are held open with a small instrument. During the examination, the eye is rotated so that the outermost blood vessels of the retina can be seen. This looks uncomfortable, but your child will not feel any pain. After the examination, the pupils remain dilated for about 3-5 hours. During this time, your child may be more sensitive to light.

Follow-up Checks

The eye examinations are performed until the retina has completely developed blood vessels. In normal eye growth, annual controls (up to 3 years) are planned in pediatric ophthalmology (orthoptics) to check the development of vision and, if necessary, to correct with glasses.

Treatment

Reduced vascular development and / or abnormal neovascularization of the retina can have serious consequences for the eye, undetected or untreated. Fortunately, treatment of the eye is only necessary for a few children. Laser therapy or drug therapy can be considered as a treatment for the undersupplied avascular retina. After the retinal examinations have been completed, the child is usually regularly examined by the pediatric ophthalmology team (orthoptics).

If you have any questions, the treating team at the eye clinic will be happy to assist you at any time.

Retina Team



Please scan the QR code for an up-to-date overview of the retina team

ROP Team



Please scan the QR code for an up-to-date overview of the ROP team