Editorial

The sensitive period in infancy

When a child is born with a truly congenital squint or a unilateral barrier to vision one expects that the patient will swiftly develop dense amblyopia and fail to develop binocular function. This situation has been simulated in animal experiments and much has been written on changes, both structural and functional, in the retina, lateral geniculate nucleus, and visual cortex.

In this context, the paper by Elston and Timms, in this issue, is of great interest in that it points out that the newborn infant is relatively resistant to amblyopia in the first few weeks of extrauterine life. They report seven neonates with either congenital sixth nerve palsy (four cases), congenital third nerve palsy (one case), retinal haemorrhage, or lid haematoma (one case each). In all cases the motor or sensory disruption would have been adequate to produce amblyopia if the problem had persisted, but spontaneous resolution occurred in all cases and on subsequent examination at ages ranging between 10 months and 5 years all patients had normal findings on orthoptic examination.

Elston and Timms rightly draw attention to the period required for the sensorimotor obstruction to disappear. In their series this was from 4 to 6 weeks, and they therefore conclude that the latent period is at least this long. They are unable to state from their study what the upper limit of this period is and whether it is identical for the development of amblyopia and for development of binocular single vision.

Further careful observations of otherwise normal neonates with early ocular problems will be required to help define the limits of the latent and sensitive periods. In this context one should note the recent report by Cheng *et al*¹ on visual results after surgery for monocular congenital cataract, which found that the cases with good visual results were exclusively those whose visual rehabilitation had been achieved by 17 weeks of age.

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¹ Cheng KP, Hiles DA, Biglan AW, Pettapiece MC. Visual results after early surgical treatment of unilateral congenital cataracts. *Ophthalmology* 1991; 98: 903-10.