BILATERAL PEDIATRIC CATARACTS: nystagmus, strabismus and visual outcome: a 10-year data analysis

Judith Sahab1, Nandini Gandhi1, Machelle Wilson1, Mary O’Hara1

1 Ophthalmology, UC Davis Health System, Sacramento, CA; 2 Division of Biostatistics, Department of Translational Science Center, UC Davis, Sacramento, CA.

Purpose
• To determine whether performing cataract surgery on infants with bilateral cataracts before or after 10 weeks of age affects visual acuity outcome (VO) or nystagmus.

• To determine whether pre-operative/post-operative nystagmus or strabismus affects VO.

Introduction
The timing for cataract extraction in the case of dense bilateral congenital cataract is less well established than in unilateral cataracts. The current recommendation is to perform surgery in bilateral cases prior to the age of 10 to 12 weeks because post-operative nystagmus appears to diminish with age.

More recently, the critical age for surgical intervention for bilateral congenital cataract was reported at 14 weeks. They also reported that whether the surgeries were performed before or after 8 weeks of age did not prevent the development of manifest nystagmus post-operatively.

Methods
• Retrospective, non-randomized, single center, IRB approved study.

• Charts of all pediatric patients with bilateral cataracts between 2004 and 2013 were reviewed.

• Children with CNS disease or other ocular abnormalities were excluded.

• Twenty-six variables were analyzed

• A mixed effects ANOVA or hierarchical logistic regression was performed for the variables analyzed.

Results
• 29 subjects were included, 16 had nuclear cataracts and 13 had lamellar cataracts.

Nuclear cataract group:
• No patients in this group had pre-operative nystagmus.

• All patients had their surgery after our 10-weeks cut off.

• No patients in this group had pre-operative nystagmus.

• No statistical significant relationship between age at surgery and VO (p=0.3951), or age at surgery and post-operative nystagmus (p=0.8710).

• No evidence that pre-operative nystagmus affected the VO in that group (p=0.2836).

• All patients had their surgery after our 10-weeks cut off.

• No patients in this group had pre-operative nystagmus.

• No patients had pre-operative strabismus. Post-operative nystagmus was associated with poorer VO in both cataract groups (p=0.0617 in the nuclear group, p=0.0038 in the lamellar group). In contrast, irrespective of the type of cataract, strabismus was not significantly associated with a worse VO (p=0.7195).

Lamellar group:
• No patients had pre-operative nystagmus.

• Post-operative nystagmus was associated with poorer VO in both cataract groups (p=0.0617 in the nuclear group, p=0.0038 in the lamellar group). In contrast, irrespective of the type of cataract, strabismus was not significantly associated with a worse VO (p=0.7195).

Conclusion
• Age at surgery did not have a significant impact on VO in subjects with nuclear cataracts.

• Our data did not allow us to find a critical age for removal of congenital nuclear cataracts.

• The presence of pre-operative nystagmus did not correlate with poor VO.

• However, post-operative nystagmus was associated with worse VO.

• About 50% of our patients developed strabismus, irrespective of the morphology of the cataract. Presence of strabismus did not correlate with poor visual outcome.

References


