

# Pediatric ophthalmology: The oldest ophthalmology subspecialty

Pediatric ophthalmology is quite a fascinating branch, but frustrating sometimes, as it is difficult to examine a child. At the same time the process of acquiring the art of child examination is very exciting. It is a constantly changing and evolving field. The general ophthalmologist and subspecialist are taught most of their pediatric ophthalmology during their training and many new advances and current concepts are not well disseminated into the ophthalmic community.

Going back to the past, the evolution of this branch is to be seen close to its associated branch, Pediatrics. Pediatrics evolved from general medicine, to a certain extent for social reasons, which still exist today. At the end of the eighteenth century a movement that considered children to be a special national treasure swept across Europe. This movement marked the inception of recognizing the need for special care for children. Within a few years, hospitals dedicated to the care of children thrived in every nation in Europe. The first few children's hospitals in the United States were in Philadelphia, in 1855, Boston, in 1869, and Detroit, in 1886. These all started as very small units of 20 beds or fewer.

Ophthalmology and otorhinolaryngology (ENT) were emerging from general surgery in the nineteenth century due to the special skills needed that were separate from general surgery. Those with a special interest in Ophthalmology saw the need to come together, to share ideas and learn. The first and oldest specialty society was the German Ophthalmology Society, inaugurated in 1857. In the United States, in 1864, the American Ophthalmological Society was founded in 1864. The All India Ophthalmological Society was established in the year 1930.

Frank D. Costenbader was an American physician, frequently credited as the world's first pediatric ophthalmologist.<sup>[1]</sup> In 1943, Dr. Costenbader limited his practice to children and became the first pediatric ophthalmologist. He was bothered by the fact that those ophthalmologists interested in strabismus were mostly interested in adults with strabismus or older children. Surgery was directed at cosmetic straightening of the eyes and not establishing binocular function. To this point there were no other sub-specialties in Ophthalmology.

Dr. Costenbader took his first trainee, Marshall M. Parks, in 1947. Costenbader and Marshall M. Parks (his mentee who would later be known to many as 'the father of pediatric ophthalmology') began the first Ophthalmology Fellowship Training Program of any subspecialty at the Children's Hospital in Washington, D.C., now known as the Children's National Medical Center.<sup>[2,3]</sup>

Organization of a Pediatric Ophthalmology Society and a Periodic Pediatric Ophthalmology meeting were discussed on October 31, 1967, at the invitation of Dr. Marshall Parks, held in the Palmer House in Chicago, at the American Academy of Ophthalmology and Otolaryngology (AAOO) (Academy) meeting. Dr. Arthur Jampolsky and Dr. Cuppers had organized a very extensive strabismus meeting in Geissen. Jampolsky, Cuppers, Parks, Costenbader, and a few others met in Gruenberg to discuss forming an International Strabismus Association (ISA), which would have meetings associated with the International Congress Meetings. This was the formation of the ISA.

The formation of the American Association for Pediatric Ophthalmology (AAPO) was legally accomplished in 1974, and in 1976, Dr. Jampolsky made the motion to change the name from AAPO to AAPOS (American Association for Pediatric Ophthalmology and Strabismus).

Although Pediatric Ophthalmology Departments are being set up in the tertiary care eye hospitals, strabismology has been recognized as a distinct subspecialty in India for decades. Many tertiary eye hospitals in India established a Strabismus Department as early as in the 1960s. The Strabismological Society of India was founded in 1982, and has meetings every year. However, the need for a Pediatric Ophthalmology and Strabismus Society similar to other countries is still felt.<sup>[4]</sup>

India is in a transitional state addressing treatable and preventable causes of blindness. In India, about 320,000 children are blind, resulting in a prevalence of 0.08%, according to the Website of Orbis International, a nonprofit agency dedicated to eliminating unnecessary blindness by increasing access to and improving eye care. ORBIS has launched the 'India Childhood Blindness Initiative' to overcome this crisis. They have planned to develop 50 Pediatric Ophthalmology Centers across the country by 2012, with ORBIS-trained staff in place to treat childhood blindness.

Major causes of childhood blindness include corneal scarring secondary to vitamin A deficiency, congenital cataract, Retinopathy of Prematurity (ROP), and congenital glaucoma. One needs to address these issues in the early stage to save a child's vision and future. Trends of management for ROP are evolving. Since the first time intravitreal anti-vascular endothelial growth factors (VEGFs) were used for ROP there has been tremendous interest shown in the potential of these drugs.<sup>[5]</sup> The role of intravitreal Avastin in the treatment of ROP has been under trial.

The goal of this issue is to both update ophthalmologists on topics they may have learned during training and introduce a number of new therapeutic options we have at our disposal. The authors of these studies have summarized a wide variety of

topics seen in Pediatric Ophthalmology. Most of the studies include summaries of our current thinking and management of common diseases. We have also included some discussion of pediatric eye disease in developing nations. It is our hope that this collection of studies will improve both the knowledge and level of care offered by ophthalmologists to their pediatric patients.

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