Columbia University Medical Center

pediatric eye news

From the Department of Ophthalmology, Division of Pediatric Ophthalmology, Columbia University Medical Center and the Morgan Stanley Children's Hospital of New York

WINTER 2016

Greetings

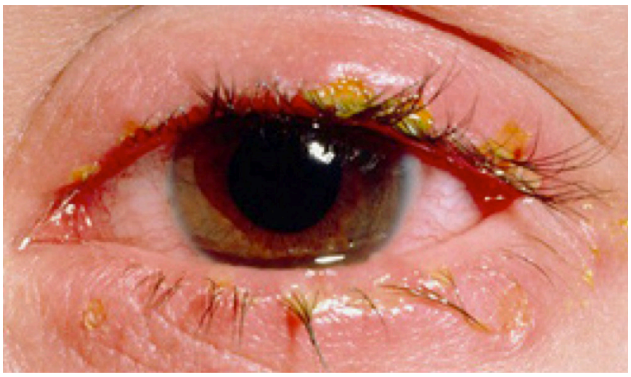
Dear Colleagues:

As the cold weather moves in, so do the winter colds. It seemed only fitting, therefore, that this edition of our newsletter be devoted to the diagnosis and treatment of eye infections in children, a troublesome but common issue in the winter months. Our goal is to present clinically relevant information that will help primary practitioners provide sound front-line management for their pediatric patients presenting with red eyes. We will also provide a brief round-up of the latest journal literature, research developments, and an EyeQ test to challenge your ophthalmic knowledge base. As always, copies of the newsletter and detailed information about our outstanding physicians, our services, and our facilities can be found on our webpages at http://childrensnyp.org/mschony/ophthalmology.html.

Division News

The Division continues to welcome referrals and new patients at both of its Manhattan locations: The Stephen M. Ross Center for Pediatric Ophthalmology located on the 5th floor of the Morgan Stanley-Children's Hospital of New York, and the Robert Burch Family Eye Center located at 15 west 65th St, on the first floor of the Lighthouse-Guild building. Beginning in February, we will be having a subspecialty clinic devoted to the treatment of infants and children with pediatric cataract or glaucoma. The clinic will be held on the 2nd Friday of the each month at the Harkness Eye Institute. It will be co-directed by Dr. Steven Kane and Dr. Steven Brooks and will offer complete medical and surgical care for patients with these rare and complicated conditions.

The Pink Eye



A red, puffy, runny eye is a common finding in pediatrics, but not all cases are due to infection. Blocked tear ducts, allergy, trauma, exposure to an irritant, and inflammatory disorders can all produce some or all of these signs and symptoms. An accurate history is one of the best ways to sort things out. For example, ***itchiness*** is uncommon with infection, but a hallmark of allergy. ***Eyelid swelling*** is uncommon with blocked tear ducts and ocular inflammatory conditions (uveitis, episcleritis), but quite common with viral conjunctivitis, trauma, contact hypersensitivity, and allergy. ***Pain and photophobia*** suggest corneal abrasion or inflammation, or uveitis, and are more serious symptoms. A history of ***contact with others having similar signs and symptoms***, on the other hand, is suggestive of a contagious infection like bacterial or viral conjunctivitis. While ***asymmetry*** is not uncommon with infections, strict unilaterality is less common. In terms of discharge from the eye, there is always some degree of ***mucopululent or watery drainage*** with infectious conjunctivitis, but not with trauma or inflammatory disease. Finally, the presence of ***palpable pre-auricular lymphadenopathy*** is strongly suggestive of viral conjunctivitis.

Although the array of underlying conditions that can lead to a red eye are numerous, empiric treatment with a topical antibiotic is reasonable if the history and examination are suggestive of bacterial infection, and no other red flags are present. The most common microbes causing bacterial conjunctivitis in school age children are *S. pneumonia*, *H. influenza* (non-type b), *S. aureus*, and *M. catarrhalis*. Treatment with a broad spectrum bactericidal agent is the most efficacious choice. In this context, it is important to keep in mind that antibiotic resistance and sensitivity data generally

(continued on page 2)

EyeQ Test:

1. Neonatal conjunctivitis from N. gonorrhea typically presents at
   a. 1 day
   b. 3-4 days
   c. 1 week
   d. 1 month

2. Constant esotropia is a normal finding in infants until the age of
   a. 2 months
   b. 4 months
   c. 6 months
   d. It is never normal

3. Which micro-organism can cause acute visual loss due to neuroretinitis *(optic nerve swelling and retinal exudates)*?
   a. Toxocara canis
   b. H. aegyptius
   c. B. henselae
   d. M. tuberculosis

4. Pain and photophobia are characteristic of
   a. Severe bacterial conjunctivitis
   b. Acute onset strabismus
   c. Herpes keratitis
   d. Children with developmental delays

5. Patients with Sturge Weber syndrome *(see photo at right)* are at significant risk of
   a. Ptosis
   b. Ipsilateral glaucoma
   c. Ipsilateral cataract
   d. Optic nerve glioma

Answers: 1. b, 2. d, 3. c, 4. c, 5. b.

The Pink Eye *(continued from page 1)*

apply to the systemic administration of the drug, where achievable levels are orders of magnitude lower than can be achieved with topical administration. Topical administration is therefore much more effective, while simultaneously reducing the potential for systemic side effects. Although bacterial conjunctivitis will often be a self-limiting condition, treatment with an effective topical antibiotic will shorten the duration, limit the contagion and morbidity, and help confirm the correct diagnosis. It is important, however, to always keep the following red flags in mind: pain and photophobia, unilaterality, lack of discharge, decreased vision, severe itching, and failure to improve promptly with a properly used topical antibiotic. In those cases, the pediatric ophthalmologist should be consulted.

Journal Round-Up

A recently published study by Griffith JF, et al. in the *American Journal of Ophthalmology* (http://www.ncbi.nlm.nih.gov/pubmed/26621684) looked at the results of vision screening in 63841 children in Cleveland, OH over a 12-year period. The authors reported that 10% met one or more referral criteria, most of which were children with decreased visual acuity. 1.4% were diagnosed with amblyopia, and 1.8% had strabismus. The prevalence figures were essentially consistent from year to year, confirming the critical need for annual vision screening in children.

Stephen Tsang, MD, PhD, a Columbia ophthalmologist and vision scientist, co-authored a report to be published in *Ophthalmic Genetics* documenting several recent cases of laser-induced retinal injury in children playing with lasers. (http://newsroom.cumc.columbia.edu/blog/2015/11/05/eye-damage-from-powerful-lasers-alarms-ophthalmologists/). The injuries resembled degenerative conditions of the central retina and were caused by commercially available lasers that were much more powerful than typical ones used as pointers. The more highly powered lasers capable of causing such injuries are not FDA-approved, but are available for purchase online from foreign companies. They can be 40-times more powerful than the FDA-approved ones, and cause serious, permanent damage to the retina in a fraction of a second.

pediatric eye news

A Publication of the Department of Ophthalmology, Division of Pediatric Ophthalmology, Columbia University Medical Center and the Morgan Stanley Children's Hospital of New York

Pediatric Ophthalmologists:
Steven Brooks, M.D.
(Division Chief)
Lauren Yeager, M.D.

For Appointments Call:
212-305-9535

Practice Locations:
Morgan Stanley Children's Hospital
3959 Broadway, New York, NY
(5th floor)
15 west 65th St., New York, NY
(Lighthouse-Guild Building)