RetCam: Indispensable Digital Imaging System

Retinopathy of Prematurity (ROP) is a critical, potentially fast progressing disease in which normal retinal development can become compromised following a premature birth. This can lead to abnormal blood vessel growth, bleeding, scar tissue and potential retinal detachment; the latter being the primary cause of blindness and visual impairment in this disease. ROP is the single leading cause of childhood blindness in both the industrialized and developing countries.

Over the last decade, both the detection methods and the treatment protocols have evolved significantly. Advanced technologies such as the RetCam (Clarity Medical Systems, Pleasanton, CA, USA) are providing the tools physicians need to properly screen for ROP.

The RetCam is an advanced, wide-field digital imaging system that delivers the next generation of ophthalmic visualization, photo documentation and ease of use. This wide-field ophthalmic imaging camera captures brilliant, full color images that can be used for immediate evaluation of pediatric ocular pathology. Stunning digital images are captured and can be shared electronically with an ophthalmologist for immediate evaluation and tracked longitudinally over time. The RetCam is equipped with a family of interchangeable lenses that provide the user with a wide range of image options that allow the physician to view both anterior and posterior ocular pathology.

Testing Premature Infants for ROP

The RetCam allows clinicians to screen premature infants who are at risk for ROP. RetCam has also been shown to be an invaluable tool in resident training, parent education and photo documentation of ROP, as an experienced user can quickly and safely obtain images of an infant’s eyes allowing physicians to view the images and better evaluate the status of the ROP disease.

Fluorscein Angiography

The RetCam 3 can be equipped with an optical light source to perform fluorescein angiography - a technique of taking a rapid sequence of photographs to examine the blood circulation of the retina using a dye tracing method. This test is performed to help the physician better visualize and photo-document the vessels in the retina of the eye.

Remote Imaging Option

The RetCam allows for the use of remote imaging as a method of obtaining and evaluating images. Physicians around the world have been successful in using the remote imaging approach which has the following advantages:

1. The physician can be remote from the facility where the images are being obtained. This eliminates the cost to physically transfer babies and family members to the physician’s location.
2. Healthcare delivery becomes more timely and efficient. There is no need to wait until a physician can be onsite to screen a baby or the need for physicians to spend their time and expense traveling to other sites
3. It has been demonstrated that healthcare professionals other than physicians can be trained to effectively perform digital imaging, further reducing the time the physician needs to spend in the neonatal intensive care unit.