

### HOSPITAL ACQUIRED PERTUSSIS IN YOUNG INFANTS

CDC Atlanta reports an outbreak of pertussis in 11 young infants (median age 31 days) in a general hospital after exposure to a health-care worker. The infants presented with cough, congestion, cyanosis, emesis and apnea. The diagnosis was confirmed by PCR. All received erythromycin and all recovered. The health-care worker was also confirmed as having pertussis by PCR. During the period that health-care worker exhibited symptoms, she directly cared for 113 infants, and 11 were affected (attack rate 9.7%). Deaths from pertussis occur with case-fatality rate of 1.8% for infants aged <2 months. The incidence of pertussis is on the rise, at least in the United States. In 2005, Tdap vaccine was licensed by the Food and Drug Administration for use in adolescents and adults. In December 2006, the Advisory Committee on Immunization Practices (ACIP) recommended use of Tdap vaccine for health care workers with direct patient contact and for adults who have or might have close contact with infants aged <12 months. The report is of interest since the Tdap vaccine is now available in India (*MMWR* 6 June, 2008).

### HOW SAFE ARE X-RAYS AND CT SCANS

“*Primum non nocere*” the latin admonishment to “First, do no harm” sometimes eludes us in our insatiable thirst for diagnosis. It is ironical that when X-rays, CT scans and other radiological investigations are done, often they are of poor quality and need to be repeated. The radiation doses are also much higher than needed and the pediatric protocols are not followed. A best estimate of the lifetime cancer mortality risk attributable to radiation exposure from a single abdominal CT examination in a 1 year old child is 1 in 550 and approximately 1 in 1500 from a head CT examination.

A study supported by the International Atomic Energy Agency (IAEA) in 12 developing countries

(not including India) showed that the fraction of the medical X-ray images rated as poor was as high as 53% (*Am J Roentgenol* 2008). This leads to unnecessary radiation doses to patients due to repeat examinations. In a study of 175 X-ray departments in India, 12% exposed patients to doses of more than 200% due to improper techniques. Thirty percent of the 30,000 X-ray units studied by the Atomic Energy Regulatory Board (AERB) in 1994 were more than 15 years old. Another AERB supported research program in 785 X-ray units in 495 hospitals revealed that 40% of the 1,15,000 examinations were on the reproductively active population and 20% were on children under 15.

Thus, there is a need for periodic inspection of X-ray and CT scan units, and strict enforcement of the X-ray safety provisions. All effort should be directed to reduce exposure. In many cases, lower-resolution scans are diagnostic. And we as pediatricians should balance the risk benefit ratio before asking for radiological investigations (*The Hindu* 5 June 2008).

### A MOVIE CALLED HOPE

Shelley Chawla, an Indian born physician, who did his MBBS from Ludhiana but now practices as a neurologist in Kansas City, USA is making headlines in the Cannes Film Festival for his film “Hope”. He has written the story, produced and even acted in the film. The movie makes a strong case for stem cell research. The central drama of “Hope” is whether Josh's father will continue to oppose stem cell research or let his son undergo an experimental procedure in India, which the movie shows as being far ahead of America in creating medical treatments from research in that area. The issue has acquired greater significance now as the Research Bill has been vetoed by US President George Bush thrice. (*Los Angeles Times* 20 May 2008).

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