visual observation as well as the hygienic impediments of the shields precludes the use of opaque reflective materials. Although apparently safe for the term infant and larger preterm infants, the application of higher irradiance to the much smaller, more translucent, and less mature preterm infant, who generally is subjected to longer periods of phototherapy, has never been studied systematically. The risks of phototherapy when applied to thin, translucent, antioxidant-insufficient infants have yet to be delineated for a prudent duration of exposure.

In the meantime, our search for evidence-based low cost strategies for safe and effective phototherapy and enhanced "drug delivery" system continues.

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Hepatitis A – Do we Still Need New Vaccines?

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Hepatitis A is an acute, usually self-limiting disease of the liver caused by hepatitis A virus (HAV), which is primarily transmitted by the fecal-oral route. In young children, HAV infection is usually asymptomatic; whereas symptomatic disease occurs more commonly among adults(1).

An estimated 1.5 million clinical cases of hepatitis A occur each year, majority of which are reported from developing countries. Hepatitis A vaccine in most developing countries is recommended only for travellers to endemic areas. This is the reason why the immunization coverage for hepatitis A is relatively low and the risk of hepatitis A infection is not perceived as a serious health problem(2). However, recently a substantial number of hepatitis A cases have been reported from developed countries. The ongoing outbreak of hepatitis A in the Czech Republic, a country with a very low incidence (2 per 100,000 population) and having a consistent decline in number of cases since the last outbreak in 1979-1980, clearly illustrates this scenario. A very low seroprevalence of HAV facilitated its spread, and hundreds of new cases in a short time led to an escalated demand of the HAV vaccine. The current outbreak was imported from the Mediterranean region highlighting an important

epidemiological aspect of hepatitis A infection in travellers(3).

HAV immunization in infants was not recommended due to the possible interference by the passively-acquired maternal antibodies which would lower the vaccine efficacy(1). Studies, where HAV vaccine was administered at 2, 4, and, 6 months of age with a booster at 12-15 months of age have been carried out to resolve this issue.

Four comparable hepatitis A vaccines are available (Havrix, Vaqta, Avaxim and Epaxal). Epaxal differs from the others in using a liposome adjuvant. Live attenuated hepatitis A vaccines have been tested in humans and are shown to be safe. Unfortunately, the vaccines studied to date replicate poorly in humans and do not induce a satisfactory immune response when given orally. This can limit another major advantage of live attenuated vaccine of only a single dose regimen. Live attenuated vaccine developed using the H2 strain is licensed for use in China. After subcutaneous or intramuscular administration the vaccine appears to be immunogenic and effective in protecting individuals and preventing outbreaks. Data show protective antibody levels of 98.6% two months after inoculation and 80.2% after ten years(4-6). Live attenuated H2 strain Hepatitis A vaccine in a single dose was also found to be immunogenic and safe in Indian children(7). Current study of Faridi, *et al*.(8) proved a similar concept in four municipal areas in India and confirmed the immunogenicity and safety of single dose injectable live attenuated hepatitis A vaccine in children 18– 60 months. It raises an important question of how to design studies in areas with higher prevalence of antibody on the baseline. Methodologically it would be better to screen all the subjects at entry, and to enroll only those who are seronegative. However, an additional visit may increase the number of drop-outs and decrease the compliance. This study follows a more practical approach where children were not tested prior to immunization. Nevertheless it would be interesting to study if the reactogenicity is higher in seropositives on baseline.

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