Tin mesoporphyrin and neonatal jaundice

I have referred before (Archivist 1992; 67: 1133) to the potential of haem oxygenase inhibitors for ‘turning off the bilirubin tap’. Now a study done on babies in Athens (Timos Valaes and colleagues, Pediatrics 1994; 93: 1–11) has shown that tin mesoporphyrin reduces the postnatal rise in plasma bilirubin.

Normal babies of between 30 and 36 weeks’ gestation were given an intramuscular injection of either tin mesoporphyrin (n=262) or saline (n=202) on the first day of life. Mean peak plasma bilirubin concentrations in controls was 198 μmol/l. In babies given tin mesoporphyrin mean peak plasma bilirubin fell with increasing dose from 178 μmol/l for those given 2.0 μmol/kg of body weight to 161 μmol/l for those given 6.0 μmol/kg. (Both controls and treated babies were given phototherapy when plasma bilirubin reached 214 μmol/l.) Phototherapy was given to 62% of controls, 41% of those given 2.0 μmol/kg of the drug, and 24% of those given 6.0 μmol/kg.

The duration of phototherapy was less in the treated babies.

There was no serious toxicity from the drug. About 10% of those given the drug plus phototherapy developed a mild erythema on areas of skin exposed to the light. It should be noted that phototherapy was given using ‘special blue’ lamps and not conventional ‘white light’ lamps. The emission spectrum of these blue lamps avoids the region of maximum light absorption by tin mesoporphyrin. No other adverse effect of treatment was noted on follow up to the age of 18 months.

It seems, therefore, that tin mesoporphyrin reduces serum bilirubin concentrations in normal preterm newborns. Whether it is preferable to phototherapy or, indeed, whether most of these babies need any treatment at all, may be debated. The authors suggest that it may be useful in developing countries where other means of treating hyperbilirubinaemia may not be available. Whether it is prudent to give to babies a drug of incompletely assessed safety for an essentially benign condition I leave for you to decide.

ARCHIVIST