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LETTER TO THE EDITOR

Nasal colonization with coronavirus and apnea of the premature newborn

Sir,

Coronaviruses are a group of RNA-containing agents, isolated in 1965 (1), responsible for mild upper respiratory tract infections in adults and children (2, 3). Their pathogenicity in newborns is not well documented; enterocolitis in neonates and lower respiratory tract infections in young children have been reported (4, 5).

From March to October 1991, we observed four cases of apneic spells in hospitalized premature newborns (mean gestational age, birth weight and age at diagnosis, respectively: 30 ± 1 weeks, 1420 ± 330 g, 19 ± 8 days). Study of their nasal secretions by indirect immunofluorescence was positive with an anti-coronavirus monoclonal antibody (Biosoft-Clonatec) and negative for adenovirus, respiratory syncytial virus, myxovirus influenza and parainfluenza. These apneic spells were associated with bradycardia. They occurred unexpectedly and had no further explanation (patent ductus arteriosus, bacterial infection, central nervous system damage). Electroencephalogram failed to prove subclinical seizures. Apneas were resistant to methylxanthine and gastroesophageal reflux treatment. Neither cough nor rhinorrhea was observed. Chest X-ray remained unchanged. All neonates recovered within 10 days. In two cases, subcutaneous atropine 0.01 mg/kg reduced bradycardia. In two cases, assisted ventilation was necessary.

Apneas are frequent in premature infants. Some are associated with viral diseases, mainly respiratory syn-

cytial virus infection, occurring in outbreaks in neonatal intensive care units (6). The role of coronaviruses in nosocomial respiratory illness in neonates may be underestimated because coronaviruses are not systematically searched for. Culture is difficult but tests using monoclonal antibodies or specific nucleic probes should give further evidence of their presence. We are conducting a prospective study to determine precisely the real incidence and risk factors of coronavirus-related nosocomial infections in neonates.

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