

Respiratory syncytial virus infection in an infant with familial Noonan disease and hypertrophic obstructive cardiomyopathy

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To the Editor—We refer to the multicentre review in *Hong Kong Medical Journal* about respiratory syncytial virus (RSV) and children with heart disease in Hong Kong.¹ There is no universal guideline in Hong Kong regarding RSV immunoprophylaxis for children with heart disease because of a lack of local data on RSV infection. The authors found predictors of severe RSV infection in patients with heart disease were heart failure, pulmonary hypertension, and severe airway abnormalities associated with congenital heart disease, and conclude RSV infection poses a heavy disease burden on children with heart disease. There is no vaccine for the prevention of RSV disease, but prophylaxis is possible with palivizumab, which is available in Hong Kong.² Indications for palivizumab are well established and include prematurity (under 35 weeks' gestation), certain congenital heart defects, bronchopulmonary dysplasia, and infants with congenital malformations of the airway.² However, the lack of distinct RSV seasonality in the subtropical city of Hong Kong can potentially affect the cost-effectiveness of prophylaxis immunisation.^{2,3} We recently managed a 4-month-old infant with Noonan syndrome and hypertrophic obstructive cardiomyopathy, who contracted RSV and developed respiratory failure, requiring venovenous extracorporeal membrane oxygenation support. Noonan syndrome is an autosomal dominant genetic disorder that may present with mildly unusual facial features, short height and skeletal malformations, and a very common syndromic cause of congenital heart disease, including pulmonary valvular stenosis, atrial septal defects, ventricular septal defects and hypertrophic cardiomyopathy.^{1,3,4} The mother also had Noonan syndrome and hypertrophic obstructive cardiomyopathy. Children aged ≤ 12 months with haemodynamically significant cardiomyopathy are at a higher risk for RSV infections and may benefit from palivizumab prophylaxis. Therefore, if resources are available, palivizumab prophylaxis should be advocated.^{1,5,6}

Author contributions

Both authors contributed to the drafting of the letter and critical revision for important intellectual content. Both authors approved the final version for publication and take responsibility for its accuracy and integrity.

Conflicts of interest

The authors have no conflicts of interest to disclose.

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