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Efficacy and effectiveness of RSV immunoprophylaxis in children with cystic fibrosis – an unsolved question with more to be asked

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The systematic review of the safety and efficacy of palivizumab in children with cystic fibrosis (CF) by Kua and Lee¹ demonstrates the woeful lack of definitive data in this area and correctly points out the critical need for additional well-designed studies. Their review examined 10 scientific reports and concluded that respiratory syncytial virus (RSV) immunoprophylaxis “may have a potential role in reducing RSV hospitalizations in children aged less than 2 years with CF”.¹ While we fully agree with the authors’ non-committal conclusions, it is important to highlight the extreme caution that must be exercised in interpreting this literature. Five studies purported to show reduced rates of RSV-related hospitalization by comparing palivizumab prophylaxis with no prophylaxis. One study was a simple survey of CF centers in the United Kingdom in which RSV immunoprophylaxis use was restricted to only 3 of 34 responding centers with no additional details regarding patients or center treatment patterns.² Two studies used historical controls rather than contemporary comparisons, an important limitation as CF morbidity has decreased drastically with recent therapeutic advancements.^{3, 4} The largest retrospective study is underpowered due to low incidence of RSV hospitalization, and the results are confounded

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by more aggressive overall treatment in patients receiving immunoprophylaxis and treatment indication.⁵

RSV prevention has both short- and long-term potential to reduce respiratory morbidity and improve lung health.^{6–8} In fact, long-term consequences of RSV prevention may be of greater importance than hospitalization rate reductions in infancy. Unfortunately, adequately powered randomized trials would be unfeasibly large. The best solution is to conduct carefully designed large observational studies examining CF infants stratified by RSV immunoprophylaxis status not restricted to RSV-related hospitalization, but with long-term respiratory and health measures being the primary outcomes. Results from such studies will certainly provide vital data in guiding the healthcare of children with CF.

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