
Bronchiolitis should not be treated with glucocorticoids or antibiotics

FROM THE SPECIALTIES

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We are in the midst of a hectic season for viral respiratory infections. Respiratory syncytial virus is the most common cause of bronchiolitis in children. The guidelines from the Norwegian Society of Pediatricians are clear that oral glucocorticoids have no place in the treatment of bronchiolitis, and antibiotics are rarely needed.

It is not only the coronavirus that is challenging our healthcare system this year. Respiratory viruses such as respiratory syncytial virus (RSV), rhinovirus and metapneumovirus can hit the youngest children hard, and give rise to lower respiratory tract infections such as pneumonia and bronchiolitis. The term bronchiolitis is reserved for children under one year of age, and up to 50–80 % of those affected will test positive for RSV.

The Norwegian Institute of Public Health estimates that this year's RSV epidemic will be more extensive than in previous years, both in terms of its duration and the number of cases (1). The most common symptoms of RSV infection are cough, increased mucus production, and increased work of breathing with chest wall retractions and nasal flaring. The youngest infants may have a more atypical clinical presentation with apnoea and poor feeding. Bronchiolitis is usually accompanied by abnormal lung sounds on auscultation, often as fine crackles or wheezing and mucus sounds that can easily be misinterpreted as bacterial pneumonia. These children rarely have a barking cough, as in cases of laryngitis, or bronchial obstruction, as with asthma. In our

experience, many children with bronchiolitis have been given oral steroids prior to being admitted to hospital. We therefore wish to highlight the recommendations for the treatment of bronchiolitis set out in the guidelines issued by the Norwegian Society of Pediatricians (2).

Treatment for bronchiolitis should consist of rest, supine positioning with the head and upper body raised, and nasal care with the use of saline drops and removal of nasal secretions. Monitoring in hospital will be necessary in cases with significant respiratory distress, apnoea or difficulties with feeding. Supplementary oxygen, fluids, nutrition and respiratory support should be given as needed.

Avoid unnecessary treatment

Systemic glucocorticoids have no documented effect on bronchiolitis and are not recommended (3, 4). No form of inhalation therapy has been shown to reduce the length of hospital stays, the incidence of complications, or the need for supportive treatment, although some studies have shown a short-term, symptomatic effect of saline inhalation (3–5). Antibiotics are rarely indicated. Secondary bacterial infection is estimated to occur in only about 0.5 % of children hospitalised with bronchiolitis (2, 3).

The steroid most commonly given to young children is betamethasone (Betapred, unlicensed product) dissolved in water. Betamethasone is a potent steroid, 0.75 mg of which is equivalent to 5 mg prednisolone and 25 mg cortisone. The recommended dose for laryngitis is 4 mg for children under 10 kg and 6 mg for those over 10 kg. Our experience is that similar doses are given relatively frequently to children with bronchiolitis. Betamethasone at these doses is equivalent to 26 mg prednisolone in children under 10 kg (2.6 mg/kg) and 40 mg in children over 10 kg (up to 4.0 mg/kg). We have encountered young children with frequent respiratory infections who have received several such treatments during their first years of life. Betamethasone has a high risk of adverse effects due to its prolonged action (6). The impact of such repeatedly high steroid doses on children's sleep, well-being, immune system function, and for their growth and development remains unknown.

In the 'Choose wisely' campaign, the Norwegian Medical Association uses the slogan 'More is not always better'. We are impressed by general practitioners, on-call doctors and healthcare workers in paediatric departments caring for all the patients that need healthcare for respiratory infections this season. However: Oral glucocorticoids have no place in the treatment of bronchiolitis, and there is very rarely a need for antibiotics.

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