

Conclusion

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Asthma is a disorder characterized by chronic inflammation of the lower respiratory tract and often requires long-term anti-inflammatory therapy. Inhaled corticosteroids have been found to be very effective in controlling the symptoms in asthmatic patients of all ages and disease severity (1), and can help to prevent long-term irreversible pulmonary damage (2).

Various delivery devices are currently available for inhalation steroid therapy for asthma, including pressurized metered-dose inhalers (pMDIs), with the possible addition of a spacer, dry-powder inhalers (DPIs), and nebulizers. Treatment success may be compromised in certain patients when using pMDIs and DPIs since they are associated with co-ordination and inhalatory difficulties, respectively (3,4). As such, nebulization appears to be a useful method in children, the elderly, and severe or steroid-dependent asthmatics since it allows effortless and effective administration of inhaled corticosteroids, even at high doses.

The purpose of the studies reported in this supplement was to demonstrate that inhaled corticosteroids administered using nebulization had comparable therapeutic effects and safety profiles to those given using an MDI in paediatric and adult asthmatics. In the studies, a new formulation of beclomethasone dipropionate (BDP), administered using a nebulizer, was compared with BDP given via an MDI (BDP MDI) and also with nebulized forms of budesonide and fluticasone propionate. Overall, the studies showed that BDP given

via a nebulizer was therapeutically equivalent to BDP MDI, and that both were equally well tolerated. In addition, nebulized BDP demonstrated efficacy and safety comparable with nebulized forms of both budesonide and fluticasone propionate. Importantly, the results confirmed that BDP nebulization, at usual therapeutic doses, had no significant effect on adrenal axis. These results are broadly in agreement with those of previous clinical studies.

In conclusion, nebulization, including jet nebulization, is an effective method of administration for inhaled corticosteroids in children and adults with asthma of varying severity and is a convenient alternative to other modes of inhalation. It is a particularly attractive and valuable option in cases where drug doses of over 500 µg are required, and to avoid in certain patients problems of poor hand–lung co-ordination that are associated with pMDIs.

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