

**Novolizer®****A Viewpoint by Peter Haidl**

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Novolizer®<sup>1</sup> is a new multidose refillable dry powder inhaler. Salbutamol (albuterol) and budesonide, important drugs in the management of asthma and chronic obstructive pulmonary disease, can be delivered by this device. To date, long-acting  $\beta_2$ -agonists and fixed combinations of long-acting  $\beta_2$ -agonists and corticosteroids are not available via Novolizer®.

Novolizer® is a low-to-medium resistance device. The lung deposition at optimal inspiratory flow is comparable between Novolizer® and the high-resistance device Turbuhaler® (about 30% of the nominal dose). However, the dependency of the delivered fine particle fraction (FPF) on flow rate is lower with Novolizer® compared with Turbuhaler®.

The clinical data are limited. Novolizer® has been compared with Turbuhaler® and showed equivalent efficacy in the case of budesonide. From the clinical point of view Novolizer® offers two rele-

vant advantages. Firstly, a triple feedback control mechanism reassures the patient that the medication has been successfully delivered. Feedback given by most other dry powder inhalers is restricted to the taste of lactose, with no minimum inspiratory flow-rate control to ensure sufficient drug de-agglomeration. Secondly, the threshold of 35 L/min required for drug delivery is of importance. If patients inhale with a lower flow (e.g. with severe bronchial obstruction or during an incorrect inhalation manoeuvre) with a conventional dry powder inhaler, they incorrectly believe they have taken the correct drug dose. However, in these cases the FPF, which represents the effective drug dose, will be very low. If patients achieve the threshold with the Novolizer® they cannot 'avoid' sufficient deposition of the drug into the lung, which takes place in the first 200 msec of inhalation.

Although comparative clinical data for the low-resistance device Diskus® or a breath-actuated metered-dose inhaler are not available, the described advantages of Novolizer® may lead to improved compliance and clinical efficacy, especially in the therapy of asthma. ▲

1 Use of tradenames is for product identification purposes only and does not imply endorsement.