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Treatment for acute asthma in the ambulance

Administration of bronchodilators by jet nebulizers is an established treatment for patients with acute asthma¹ and most patients admitted to hospital with this condition are initially treated with this form of therapy.² Giving such treatment in the ambulance on the way to hospital could prevent delay in the treatment of severe acute asthma and also reassure patients by the early administration of effective treatment. Theoretically, bronchodilator therapy can cause an increase of ventilation-perfusion mismatch and aggravate hypoxaemia, but this is obviated by using oxygen-driven nebulizers. Also, patients with cardiac disease misdiagnosed by ambulance men as having asthma could be adversely affected by beta-adrenoceptor agonist therapy.^{3,4} We have therefore analysed the available data on the effects of administration of nebulized salbutamol in oxygen by ambulance crews in the Lothian area since the inception of this service in 1986.

All patients received 5 mg salbutamol nebulized via a Unicorn nebulizer (System 22) using an oxygen flow rate of 6 l min⁻¹. On each occasion the ambulance personnel concerned completed a report form which was sent to the area training officer for collation. On arrival at the hospital the nebulizer used and a note of the medication administered was given to the admitting doctor. Between April 1986 and April 1988 this treatment was given only to patients when their general practitioners specifically requested it, but to all patients who were members of the self-admission services organized by the City and Northern General Hospitals in Edinburgh.⁵ These latter patients had been enrolled into the emergency asthma admission lists by a consultant chest physician after obtaining the approval of their general practitioners. They were considered to have unstable asthma and to be

candidates for the development of a life-threatening attack of asthma and would therefore benefit from immediate access to hospital. Since April 1988 ambulance personnel have, at their own discretion, treated all asthmatic patients under 40 years of age.

To date salbutamol nebulized in oxygen has been given by ambulance crews in ambulances on 559 occasions. The majority of treatments were given for asthma (84%), but on some occasions treatment was requested by the general practitioner for patients with other conditions (16%). All nebulizations were given using an adult mask which did not appear to create any problems in the treatment of children. There were no deaths during or after treatment in ambulances. Assessment by ambulance personnel of the benefit of therapy was that in 80% of patients there was improvement, in 15% there was no change and 1% were considered to have deteriorated (no assessment was recorded for 4%).

In the treatment of acute asthma, delay in institution of therapy can be hazardous.⁵ The use of nebulized beta-agonists for the treatment of patients with asthma in the ambulance before arrival at hospital is therefore a rational concept. Our experience to date indicates that any potentially adverse effects of therapy are by far outweighed by its benefits. Salbutamol nebulized in oxygen by ambulance personnel appears to be safe. Admittedly, information regarding effectiveness of therapy was generated subjectively by ambulance crews who could be expected to be biased in favour of the beneficial results of such treatment. Nevertheless it would appear that most patients do benefit from treatment. It is possible that the widespread use of this service in Edinburgh explains, in part, the lower death rate from asthma compared with other cities in Scotland.⁶ It is our opinion that oxygen driven nebulized beta-adrenoceptor agonist therapy should be available in all ambulances used to transport patients with

severe acute asthma to hospital, and that this treatment should be administered at the discretion of trained ambulance crews.

C G WATHEN
G K CROMPTON
D CARRINGTON
J HOLLINGWORTH

Respiratory Unit
Northern General Hospital
Edinburgh EH5 2DQ

References

- Douglas JG, Rafferty P, Fergusson RJ, *et al.* The efficacy and safety of salbutamol nebulised in air in the treatment of severe acute asthma. *Thorax* 1985; **40**: 180-3.
- O'Driscoll BR, Cochrane GM. Emergency use of bronchodilator drugs in British hospitals. *Thorax* 1987; **42**: 491-493.
- Neville E, Corris PA, Vivian J, *et al.* Nebulised salbutamol and angina. *Br Med J* 1982; **285**: 796-797.
- Stainforth JN, Lewis RA, Tattersfield AE. Dosage and delivery of nebulised beta agonists in hospital. *Thorax* 1983; **38**: 751-754.
- Crompton GK, Grant IWB. Edinburgh Emergency Asthma Admission Service. *Br Med J* 1975; **4**: 680-682.
- Mackay TM, Wathen CG, Arundel J, Sudlow MF. Regional trends in asthma mortality in Scotland. *Scott Med J* 1990 (in press).

Advice on the appointment of psychologists and counsellors within general practices

Sir,

New regulations have come into force this year covering the operation of general practices. These regulations are much more liberal in allowing general practitioners to employ directly such staff as psychologists and counsellors (albeit within cash limits). However, when general practitioners employ 'health professional staff' (that is staff who provide care directly to patients) they are required 'to make sure that such staff are properly qualified'.

Herein lies a problem when it comes to defining who is a properly qualified