

Inhaled drug delivery in asthma patients

Sir,
I read with interest the article 'Optimising inhaled drug delivery in patients with asthma' in the December 1995 *Journal*.¹ Would that life and 'lung deposition' were so straightforward but, alas, Jackson and Lipworth fundamentally misunderstand the principles involved. They fail to appreciate the importance of allowing patients to choose the device they prefer — something that respiratory trained nurses have been doing for years. There is no device preferred by all patients, and it is misleading to quote deposition statistics and extrapolate these to clinical practice. The amount of drug deposited in the lung using the same device in different patients varies tremendously: up to tenfold using sodium cromoglycate.² This variation far outweighs the estimated or mean figures as quoted by Jackson and Lipworth, and is not dissimilar to the variation seen in the same patient using the same device from one inhalation to the next.

All inhalers have widely varying characteristics, so it is imperative that deposition, clinical efficacy and systemic availability are all measured in the same study. It is inappropriate to infer clinical differences from studies using different methodologies, sometimes with patients and at other times with health volunteers. These points have been aired and discussed in recent correspondence.^{3,4} Any device which deposits more medication in the lung may or may not produce a greater clinical effect depending on the dose response curve of the medication in the patient at that time. It is unquestionable, however, that such a device will increase the systemic bio-availability of the deposited medication.

Finally, I am intrigued by the authors' suggestion that fluticasone propionate is a more potent inhaled corticosteroid, but that this does not translate into increased efficacy in doses greater than 1 mg/day. It is particularly when high doses of inhaled corticosteroids are required that chest physicians and respiratory paediatricians have extensively used fluticasone propionate and found it to be a clinical improvement compared with previously available inhaled corticosteroids. Could I suggest that, although it is possible to fool some of the people some of the time, ultimately the proof of the pudding is in the eating — or even, possibly, in the inhaling?

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How well does mortality reflect the burden of illness due to stroke?

Sir,

Achieving a reduction in mortality rates from stroke is one of the targets of the Health of the Nation strategy.¹ Routine monitoring of this target is based on information derived from death certificates and depends on the accuracy of death certification.

To obtain more information about the impact of stroke locally, we reviewed the outcome for all 273 patients who had been admitted to a Bolton hospital following a first stroke in 1990. The inpatient mortality was 45% (123/273). A further 78 patients died within four years of discharge. Copies of death certificates were available for 67 of the patients who died after discharge. There was no mention of stroke or cerebrovascular disease on 33 of the 67 certificates examined (49%); on these certificates, death was attributed to cardiovascular disease ($n=18$), cancer ($n=10$) and other ($n=5$).

We obtained information about patients who were still alive four years after their discharge from hospital, by sending a brief questionnaire to their general practitioners (GPs). Four patients who had survived for four years after discharge died before the survey. The response rate to the questionnaire was 92.6% (63/68). Fifty of the survivors (79.4%) were living at home or with relatives; the remainder (13/63)

were living in a nursing home or residential accommodation. The degree of disability experienced by the survivors was estimated by GPs using the modified Rankin Scale,² and is presented in Table 1.

Our finding that there was no mention of stroke on almost half of the death certificates does not imply that the certificates were improperly completed. However, the absence of any mention of stroke on many of the death certificates means that stroke mortality rates, based on death certification, are not an adequate measure of the burden of illness caused by stroke.

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Higher professional training within general practice: provision of courses in the United Kingdom

Sir,

Two years ago, in a letter to the *BMJ*, Dennis Cox¹ identified the need for an up-to-date list of courses appropriate for general practitioners (GPs). Such a list, in the form of a directory of part-time and distance-learning degrees, diplomas, certificates, PGEAs and other courses, already exists and has been edited by myself for the past four years. The directory, which is updated annually, was developed as a

Table 1. Disability of stroke survivors (Rankin scale). $n=68$.

Disability	Persons	(%)
0 No symptoms	10	(14.7)
1 No significant disability	5	(7.4)
2 Slight disability	13	(19.1)
3 Moderate disability	18	(26.4)
4 Moderately severe disability	16	(23.5)
5 Severe disability	1	(1.5)
No response to questionnaire	5	(7.4)