

that we could identify at surgery. For this to have biased our results one would have to assume either that we selectively sampled small lymph nodes that were malignant or that even smaller nodes would have been more likely to be benign. The former is not true and the latter unproved and certainly not supported by the remainder of the data in our study.

Node station data were included to give the reader some impression of where in the mediastinum the lymph nodes originated. The lack of data relating lymph node station to site of primary tumour in no way detracts from any of the conclusions in our study.

We do not accept that we have measured the wrong lymph node diameter. Computed tomography measurements are made in the shortest diameter as this value is the one least likely to be artificially inflated by oblique cuts on the scan. Mediastinal lymph nodes are haphazardly orientated and also vary widely in shape. In addition, the relationship between increasing lymph node width and length put forward by Drs Weston and Goddard is a gross oversimplification. Lymph nodes do not enlarge symmetrically and their asymmetrical expansion is not constant in pattern. Important variables include the location of the malignant deposit within the node, which part of the lymph node (if any) is enlarged by the malignant deposit, and how much of the node is replaced by tumour. Computed tomography measurements of the shortest diameter represent a simplified score of lymph node size, specifically designed to eliminate artefact and minimise differences between the angle of section of lymph nodes. In contrast, we had access to the whole lymph node and thus were able to make actual measurements that were representative and repeatable and—most importantly—allowed comparison between the benign and the malignant group. Measuring maximum diameter in no way invalidates our conclusions, and we stated quite clearly in our paper that direct comparison between published computed tomography measurements of nodes and our data were not intended and that that this would be erroneous.

Drs Weston and Goddard quote selectively a study that has been performed directly to investigate the value of mediastinal computed tomography. Several recent studies,¹⁻⁴ including one of our own,³ have indicated that preoperative computed tomography is a far from perfect approach to staging the mediastinum in lung cancer.

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Barcelona's asthma epidemics

I found Dr C Picado's article on the clinical characteristics of the Barcelona asthma epidemics (March 1992;47:197) a very clear-cut and stimulating summary. His assertion that these findings would support a search for other potential point sources of aeroallergens or air pollutants as a cause of a high incidence of asthma in particular areas was suggested in a leader on soya bean asthma in the *Lancet*¹ and this undoubtedly needs reinforcing. The difficulty lies where so called outbreaks are less dramatic, when it is important to try to find a definition of an epidemic day. The simplest method is to take any day when numbers of exacerbations of asthma are outside two standard deviations from the mean for a period of time. This may be somewhat harsh but has the benefit of simplicity. In order to define these "high spots" one may need to look at areas of a country where asthma is thought to be more common by looking at standardised hospitalisation ratios rather than deaths. There are wide variations in the UK for both hospitalisation rates and mortality and this would seem a suitable starting point.

The idea that the particle size is important is crucial. Does Dr Picado have any idea of the genuine particle size of the soya dust that was inhaled on epidemic days as opposed to that of the dust used in wet antigen challenge? A theory was put forward many years ago that very small particles would be exhaled immediately after inhalation because of their small size and dynamics. If the soya particles are submicronic in size Dr Picado's hypothesis would tend to oppose such a theory unless only limited lung retention of what is clearly a highly allergenic substance was able to cause an acute response.

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AUTHOR'S REPLY Although I tried to explain the most striking peculiarities of Barcelona's outbreaks, one of the questions raised in Dr Ayre's letter made me realise that in the article I missed one aspect that may be crucial for detecting an "unusual day" so far as the number of patients suffering asthma exacerbations is concerned.

Apparently, as he suggests, the simplest method of determining whether a day is unusual is to count the number of patients suffering exacerbations and then to take any day with numbers outside two standard deviations from the mean for a period of time. The experience of Barcelona suggests, however, that, for defining an unusual day, recording the names of the patients is probably better than counting the number of asthmatic patients attending the emergency room. This suggestion is based on the fact that in Barcelona's asthma epidemics several patients suffered repeated episodes of severe acute asthma, which in the more extreme cases required admission to the intensive care unit for artificial ventilation. The history of

the patient most severely affected offers some interesting insights.

The patient, a 56 year old woman (Miss MB), had been suffering from asthma since childhood. For many years the disease followed a chronic course with occasional mild or moderate exacerbations that never required hospital admission. She was treated with bronchodilators, cromoglycate, and finally beclomethasone. She also received short courses of oral corticosteroids during exacerbations, some of which were precipitated by exposure to house dust and pollen. A prick test showed positive reactions to *Dermatophagoides pteromyssinus*. In February 1981 she suffered a sudden and severe asthma attack requiring mechanical ventilation for the first time. Within the next two years she was admitted to hospital 18 times and she underwent artificial ventilation on 10 of those occasions. When the first episodes of asthma outbreaks were detected during 1981 and 1982 it became evident that Miss MB was always affected in these episodes. In fact, on epidemic days she was one of the earliest to attend the emergency department. The arrival of Miss MB triggered the "red alert" for an asthma outbreak. Although not all emergency attendances of Miss MB were on epidemic days many of the occasions could be considered as "unusual days," with more cases than expected of severe asthma admitted to hospital. She continued to suffer frequent exacerbations and finally died in June 1984 as a consequence of hypoxaemic encephalopathy and pneumonia. Combined treatment with high doses of different bronchodilators (beta mimetics, ipratropium bromide, and theophylline), beclomethasone, and oral corticosteroids proved to be totally ineffective for preventing severe asthma attacks.

Other patients in Barcelona suffered recurrent asthma attacks and often several of these "repeaters" coincided once or more with Miss MB in the emergency room. Some of these days might not be considered unusual days according to a statistical criterion (number of patients) but were clearly unusual when we looked at the names of the patients admitted to the hospital. Interestingly, the history of Miss MB was initially published as an example of recurrent idiopathic sudden severe bronchospasm.¹ Many reports have described patients who suffer recurrent attacks precipitated by unknown causes. These patients, like patients affected in Barcelona's outbreaks, often have asthma not responding to treatment. Perhaps the erratic oscillation of symptoms is a reflection of changes in the concentrations of environmental allergens. As only the most severe cases are usually seen in the emergency room, counting the number of patients admitted to hospital would not reveal the existence of an atmospheric factor causing less severe exacerbations of asthma in many more patients who do not usually require hospital admission. If two or more asthmatic patients are repeatedly attending the emergency room the same day the possibility that an environmental factor is causing the asthma attack should be suspected.

Unfortunately, to my knowledge there are no studies on the particle size of the soya dust. The size of the particles concerned in epidemic asthma do not necessarily need to be submicronic and might be similar in size to mould spores. Dr Ayres knows that fungal spores have been implicated in episodes of epidemic asthma.² In addition, O'Hollaren *et al*³ have recently reported that exposure to the

aeroallergen *Alternaria alternata* may precipitate sudden asthma attacks. Interestingly, nine of the 11 patients described by O'Hollaren *et al* had suffered repeated severe acute asthma exacerbations.

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BOOK NOTICE

The Health of the Nation: The BMJ View. Edited by Richard Smith. (Pp 237; £9.95 (UK), £12 (overseas). London: British Medical Journal, 1991. ISBN 0-7279-0314-4.

Remember 1991? The government, running up to a general election, besieged by the health lobby and a rampant BMA, counter-

attacked with radical proposals for positive health—the green paper *The Health of the Nation*. The *BMJ* responded with a series of essays on the key issues. This paperback is a collection of these essays, covering a wide range of topics from rehabilitation to poverty and from medical genetics to aging, including cancer, asthma, and HIV infection. It is an easy to read handbook of public health. Most of the essays are spiced by the tensions of the time. While welcoming the initiative, few resisted the temptation to make political points and debate runs through the book. The recurring central critical comments were reflected in Peter Burney's paper on asthma: the failure to address inequality and socioeconomic factors; the arbitrariness of targets; the difficulties of case definitions and controversies about care and the demonstrated benefits of "good practice"; the need to focus on the environment and the social framework that makes it difficult for individuals to change their lifestyle, rather than on a disease and medical process; and the need for research. The chapter on tobacco showed nicely how government action by fiscal measures and change in legislation would achieve far more than health education. The section on HIV reflected the temptation to avoid those areas where measurement might be difficult. Events move on and after consultation the white paper contains only five key areas. Yet this book is more than just a vignette in the history of medical politics. It certainly deserves a place on postgraduate centre library shelves, but perhaps few disillusioned respiratory physicians will buy it. How could any government wishing to be judged by its actions as well as its words fail to ban tobacco advertising?—CWGT

NOTICES

Congress of the Asian Pacific Society of Respiriology

The third congress of the Asian Pacific Society of Respiriology will be held on 7-10 October 1993 at the Mandarin Hotel, Singapore. It is being organised by the Singapore Thoracic Society under the auspices of the Asian Pacific Society of Respiriology. Further details from the Secretariat, Third Congress of the Asian Pacific Society of Respiriology, 336 Smith Street, 06-302, New Bridge Centre, Singapore 0105 (fax (65) 2270257).

Bronchitis V symposium

The Bronchitis V international symposium is on the theme "Advances in the understanding of asthma and chronic obstructive lung disease." The symposium will be held on 9-11 June 1993 in the Martini Hall Congress Centre at Groningen. The main themes of the symposium are: morphological aspects; cellular interactions; natural history; modification of disease outcome; novel therapeutic perspectives. Further information from CARA Research Group Groningen, University Hospital, Department of Pulmonology, 59 Oostersingel, 9713 EZ Groningen, The Netherlands (telephone 31 50 612357; fax 31 50 124614).