

Letters to the Editor

HEALTH EFFECTS OF RESPIRABLE DUST FROM OPENCAST COAL MINING

Sir, In their communication, Munro and Crompton¹ quote an IOM paper on a survey of the respiratory health of their opencast coal workers.² Their description of our published findings is somewhat inaccurate, and this and their interpretation may mislead.

They say 'five workers with CDSP (coal dust simple pneumoconiosis) were diagnosed.' In fact, no diagnoses were made. (We reiterated this point in the correspondence following the paper's publication). Three experts in chest radiology described the appearances on the radiographs according to the ILO (1980) scheme, working blind as to the occupational exposure history of the subjects. Summarising the three readings by their median, five men had films described as having small opacities of profusion category 2/1 or greater. Such methods of descriptive classification are standard in epidemiology; they do not constitute, and should not be interpreted as, diagnoses.

Munro and Crompton point to the low concentrations of respirable coal dust and comment that 'it is remarkable that any significant changes were detected', postulating a cause in individual susceptibility, domestic exposures or synergy between coal particles and diesel emission particulates. Our paper already contains an explanation at least as plausible.

Our analyses of the radiological changes in this population data pointed to an association with exposures in the dustiest, pre-production occupations, and not elsewhere. To explain this pattern by individual susceptibility would require susceptible individuals to be selectively recruited into the dustiest occupations, which seems unlikely. However, the exposures in these occupations typically contained higher proportions of silica (quartz) than elsewhere, because they involve drilling in, blasting and removing the overburden which is often sandstone or other silica-bearing material. It is well known that respirable silica, particularly with freshly fractured surfaces, is much more toxic than coal dust. We concluded that the radiographic appearances were probably silicosis, and noted that this was consistent with US findings. We found no evidence of a risk from the coal dust particles themselves.

Silica particles can be expected to be much larger than diesel exhaust particles, and would be unlikely to travel far from their source: again, this is consistent with the absence of elevated risk in the other on-site occupations.

BG Miller, Head of Statistics, Institute of Occupational Medicine

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- ¹ Munro JF, Crompton GK. Health effects of respirable dust from opencast coal mining. *Proc R Coll Physicians Edinb* 1999; **29**:11-15.

- ² Love RG, Miller BG, Groat SK *et al.* Respiratory effects of opencast coalmining: a cross-sectional study of current workers. *Occup Environ Med* 1997; **54**:416-23. (Correspondence: OEM 1998; **55**:287-88.)

Sir, We are grateful to Dr Miller for his comments regarding the relative importance of silica and coal dust. Clearly we should have referred to the results described by Dr Miller and his colleagues using the term 'Pneumoconiosis', not 'Coal Dust Simple Pneumoconiosis'. We do not consider, however, that his comments influence our proposal that some of the respiratory effects of opencast coal mining may be attributable to on-site DEPs as distinct from the dusts produced by the quarrying process.

Any review article has to balance the need for objectivity with brevity. We are, however, confused by Dr Miller's concern regarding our use of the word 'diagnosed'. We are unable to distinguish any difference in the 'diagnostic' emphasis between our statement and the actual wording of the abstract in the IOM article. This was 'Five men had category two pneumoconiosis and two men (including one of these five) had progressive massive fibrosis category A.'

The problems facing authors of review articles are compounded if the original articles are themselves ambiguous or misleading. An example of the latter occurs in the IOM paper which stated that 'the proportion of opencast workers reporting symptoms of chronic bronchitis (13%) was considerably less than that found in our most recent study of underground coal miners (22%) but slightly higher than in a workforce not exposed to dust (9%) drawn from a similar social group'. Dr Miller and his colleagues cited as the reference a previous article from the institute entitled 'Respiratory Ill-health Among Coal Workers And Telecommunication Workers In South Wales'.¹ This paper described a 5% instance of chronic bronchitis in the telecommunication workers. We have previously drawn this ambiguity to the attention of the Institute; an ambiguity which is important because the Institute's findings are being inaccurately used by the opencast industry. We are hopeful that the Institute will wish to publish a correction in an appropriate journal, as we remain confident that the Institute shares with us the desire to avoid any inaccuracies and misleading statements.

In the meantime we have identified an error in our paper. The size of coal dust ranges from 1-1,000 microns and not 10,000 microns as published.

JF Munro, Honorary Fellow, Faculty of Medicine,
Edinburgh University
GKC Crompton, Physician in Respiratory Medicine,
Western General Hospital, Edinburgh

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- ¹ Lloyd MH, Gauld SJ, Soutar AC. Respiratory ill health among coal miners and telecommunication workers in South Wales. *Br J Indus Med* 1986; **43**:177-81.

WORKING TOGETHER FOR THE ADVANCEMENT OF KNOWLEDGE

Sir, When considering improvement and development in any speciality, no country can remain idle in spite of concurrent financial and academic constraint: medical education is no exception. During the last three or four decades, medical education has been developed in South East Asia Region (SEAR) to a very major extent. Bangladesh, immediately after its liberation in 1971, initiated postgraduate education at home by establishing the Bangladesh College of Physicians & Surgeons. The Pakistan College of Physicians and Surgeons came into existence in 1962 and their first examination was held under its auspices in 1968.

Had it not been for such developments, countries such as Bangladesh might have faced a critical situation because of a lack of essential postgraduate qualified health manpower to start the staff and foster the postgraduate education programme. Before the establishment of these colleges, hardly more than one or two trainees obtained their MRCP or FRCS and returned to the country. This would have meant that by now there would only be about 60 doctors qualified annually from the Royal Colleges in the UK, and obviously this would have led to a critical situation. Through the auspices of the Bangladesh College of Physicians & Surgeons, 500 medical Fellows have qualified by examination in different specialities and are now fully engaged in local Medical Colleges, Postgraduate Institutes and Divisional Headquarters, as teachers/consultants.

In this way the vacuum has been filled and these local postgraduate establishments have been able to create sufficient postgraduate medical manpower to avert a crisis in the field of medical education and specialised health care.

The immediate consequence of this development of postgraduate education in the developing 'colonial' countries is a lower participation by postgraduates from these countries at the British Royal College examinations, with this trickling to minimum level in recent months; the qualifications and various diplomas which have been introduced have decreased the attraction that UK Colleges

had previously provided. The number of remaining Members and Fellows of the UK Royal Colleges is also getting smaller because of death, retirement or change of nationality, and it is perceived that within a decade or so there may not be any Fellows or Members who would be able to speak for or represent the UK Colleges.

The past and continuing contribution of Royal Colleges is well recognised in Asian countries and greatly appreciated. Development of local postgraduate education has been unable to replace the lengthy experience of the Royal Colleges which has been acquired through decades of involvement in this field. Only gradually will this expertise be transplanted. A direct and all-embracing link at the academic level between the Royal and National Colleges must be established and continued, for the benefit of both institutions perhaps with more of the initial benefit derived by the colleges in the developing nations.

In achieving this, I propose that both the National and the Royal UK Colleges should work together and a common formula found for a joint academic platform from where we can supervise, organise and conduct postgraduate courses and examinations so to maintain the uniformity of standard and the academic level of the Royal Colleges within the developing countries. This suggestion may not receive universal approval: the 'conservatives' might not appreciate its full impact and object. The risk exists of any previous links being severed and there must be a 'give and take' policy. Unless this is done the developing countries shall have to climb the heights of excellence on their own. Should we loose the link or tighten it? Working together, we can win; by separation we all lose. Medicine should have no boundary or political influence. This is a plea for working together for the advancement of knowledge and benefit of all.

N Islam, Emeritus Overseas Regional Adviser,
National Professor and
President, University of Science and Technology Chittagong
(USTC), Bangladesh