



THE INDUSTRIAL INJURIES ADVISORY COUNCIL

POSITION PAPER 17

INTERSTITIAL FIBROSIS IN COALWORKERS

www.iiac.org.uk

INDUSTRIAL INJURIES ADVISORY COUNCIL

PROFESSOR A J NEWMAN TAYLOR, CBE, FRCP, FFOM, FMEDSCI (Chairman)

PROFESSOR M A AYLWARD, CB, MD, FRCP, FFPM, FFOM, DDAM

DR M G BRITTON, MD, MSc, FRCP, Dip (Ind. Health)

DR A COCKCROFT, MD, FRCP, FFOM, MB, BS

MRS D KLOSS, LLB, LLM

DR I J LAWSON, MB, BS, DRCOG, MIOSH, FFOM

MR S LEVENE, MA

DR K PALMER, MA, DM, FFOM, MRCP

MR J PRESTON-HOOD, MBA, DipHS, CMIOSH

MR H ROBERTSON, MSc, DipFMS, CMIOSH

DR A SPURGEON, BSc, PhD, C. Psychol

MS C SULLIVAN, MA, GradDipPhys, MCSF

MR A TURNER, TechSP

MR F M WHITTY, BA

DR L WRIGHT, BMedSci, BMBS, FFOM

Previous Industrial Injury Advisory Council Member

MR M PLATT, BA, Msc

POSITION PAPER 17

Interstitial fibrosis in coalworkers

1. At the IIAC Public Meeting in Newcastle in October 2005, participant asked a question about the occurrence of interstitial fibrosis in coalworkers, and whether this should be considered for prescription. We reviewed the literature in order to respond to this question. This Position Paper summarises the information in the literature and the conclusions about prescription that followed from this.

Interstitial fibrosis as part of coalworkers pneumoconiosis

2. A number of research papers mention interstitial fibrosis in coalworkers as part of coalworkers pneumoconiosis, and some degree of such fibrosis is common. Some of these papers report on coalworkers with lung function changes which are compatible with interstitial fibrosis as well as the obstructive lung function changes typical of coalworkers pneumoconiosis [1, 2, 3]. The fibrosis in these cases is likely to be *part of the disease process of coalworkers pneumoconiosis*. In these cases, the disability associated with the interstitial fibrosis will be covered under the existing prescription either because of a diagnosis of coalworkers pneumoconiosis or a diagnosis of chronic bronchitis

and emphysema (since such cases usually have a mixed picture of lung function impairment)

Cases of clinical interstitial fibrosis in coalworkers

3. A few research papers report on a more typical picture of interstitial fibrosis, developing in coalworkers with or without coalworkers pneumoconiosis [4,5]. These papers are case studies (rather than epidemiological studies) of the condition and they do not allow an estimate of the risk of interstitial fibrosis in coalworkers in comparison with the risk of this condition in non-coalworkers.

4. One paper gives some information about the risk of interstitial fibrosis in men with coal work exposure compared with a non-exposed population, in Moravia and Silesia [6]. The author found no difference in the rates of interstitial fibrosis between coalmining areas with a high rate of pneumoconiosis and agricultural areas. The study design was weak, but the findings do not provide support for an excess of interstitial fibrosis in coalworkers.

Conclusions

5. There is good evidence for a *form of interstitial fibrosis which is really part of the disease process of coalworkers pneumoconiosis* and is not typical of cases of interstitial fibrosis in non-coalworkers. It is associated with a particular

pattern of lung function impairment (restrictive as well as obstructive lung function deficits, as well as reduced gas transfer factor), and is reflected by predominantly irregular opacities on the chest radiograph. The disability caused by this interstitial fibrosis element of coalworkers pneumoconiosis is already covered in the prescription of coalworkers pneumoconiosis and chronic bronchitis and emphysema in coalworkers.

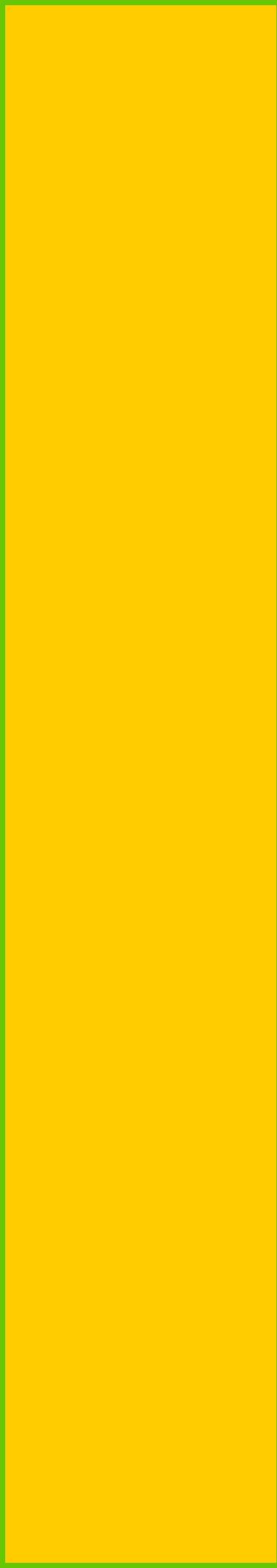
6. While there are some cases studies of a more 'typical' interstitial fibrosis in coalworkers, but they *do not provide evidence to assess if there is an excess risk among coalworkers*. The only reported study that allows some comparison of the risk of this condition in coalworkers and non-coalworkers (indirectly) is of a weak design but does not suggest an excess risk in coalworkers.

7. There is no evidence available that would allow separate prescription of interstitial fibrosis in coalworkers. However, the evidence that is available suggests that interstitial fibrosis in coalworkers is nearly always associated with changes that would allow the disability from the fibrosis to be taken into account as part of the assessment for coalworkers pneumoconiosis or chronic bronchitis and emphysema.

8. The Council has therefore decided not to make any recommendations for change to the list of prescribed diseases.

References

1. Musk AW, Cotes JE, Bevan C, Campbell MJ. Relationship between type of simple coalworkers' pneumoconiosis and lung function: A nine-year follow-up study of subjects with small rounded opacities Br J Ind Med 1981; 38: 313-20
2. Cockcroft A, Berry G, Cotes JE, Lyons JP. Shape of small opacities and lung function in coalworkers Thorax, 1982; 37: 765-9.
3. Soutar CA, Hurley JF. Relation between dust exposure and lung function in miners and ex-miners. Br J Ind Med 1986; 43: 307-20.
4. McConnochie K, Green FHY, Vallyathan V, Wagner JC, Seal RME, Lyons JP. Interstitial fibrosis in coal workers: experience in Wales and West Virginia. Annals of Occup Hygiene, 1988; 32 Suppl 1: 553-560
5. Brichet A, Wallaert B, Gosselin B, Remy-Jardin M, Voisin C, Lafitte JJ, Tonnel AB. "Primary" diffuse interstitial fibrosis in coal miners: a new entity? Study Group on Interstitial Pathology for the Society of Thoracic Pathology of the North. Rev Mal Respir 1997; 14: 277-85
6. Kolek V. Epidemiology of cryptogenic fibrosing alveolitis in Moravia and Silesia. Acta Univ Palacki Olomuc Fac Med, 1994: 137: 49-50.



Report published April 2006