

Occupational Burden of IPF and other interstitial pneumonias

Idiopathic pulmonary fibrosis (IPF) is a diagnosis of exclusion. It is made in the presence of a usual interstitial pneumonitis (UIP) pattern on high resolution CT scan or biopsy. The diagnosis requires that known causes of interstitial lung disease (such as drug toxicity, connective tissue disease, domestic, and occupational or environmental exposures) be excluded¹.

1 Search strategy

We searched pubmed and google scholar for "idiopathic pulmonary fibrosis" and synonyms including "cryptogenic fibrosing alveolitis" and "usual interstitial pneumonia" in combination with the term "occupation" and synonyms. Where we found relevant studies or review articles we also looked at the papers these papers cited and the papers that cited them.

2 Results

We identified four previous review articles (Table 1)² and 12 relevant articles and one abstract (Table 2).

There are many review articles of the epidemiology of interstitial lung disease that do not necessarily focus on IPF and only briefly mention occupational factors. We selected review articles that specifically deal with occupational factors in IPF and cite the case-control studies identified.

² Discusses difficulty in attribution/causality

3 Meta-analysis

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year	title	first author	journal
1998	In search of a cause of cryptogenic fibrosing alveolitis (CFA): one initiating factor or many?	Turner-Warwick M	Thorax
2001	Occupational dust exposure and the aetiology of cryptogenic fibrosing alveolitis.	Hubbard R	Eur Respir J Suppl
2005	Is Idiopathic Pulmonary Fibrosis an Environmental Disease?	Taskar V	Proc Am Thorac Soc
2015	Asbestosis and environmental causes of usual interstitial pneumonia.	Gulati M	Curr Opin Pulm Med

Table 1: Previous review articles of IPF and occupational factors

year	title	first author	journal
1990	What causes cryptogenic fibrosing alveolitis? A case-control study of environmental exposure to dust.	Scott J	BMJ
1994	Idiopathic pulmonary fibrosis. Epidemiologic approaches to occupational exposure.	Iwai K	Am J Respir Crit Care Med
1996	Occupational exposure to metal or wood dust and aetiology of cryptogenic fibrosing alveolitis.	Hubbard R	Lancet
1998	Case-control study of idiopathic pulmonary fibrosis and environmental exposures.	Mullen J	J Occup Environ Med
2000	Risk of cryptogenic fibrosing alveolitis in metal workers.	Hubbard R	Lancet
2000	Occupational and environmental risk factors for idiopathic pulmonary fibrosis: a multicenter case-control study. Collaborating Centers.	Baumgartner KB	Am J Epidemiol
2005	Occupational and environmental factors and idiopathic pulmonary fibrosis in Japan.	Miyake Y	Ann Occup Hyg
2007	Occupational exposure and severe pulmonary fibrosis.	Gustafson T	Respir Med
2008	Occupational risks for idiopathic pulmonary fibrosis mortality in the United States.	Pinheiro GA	Int J Occup Environ Health
2010	Risk factors for idiopathic pulmonary fibrosis in a Mexican population. A case-control study.	García-Sancho FMC	Respir Med
2012	Occupational and environmental risk factors for idiopathic pulmonary fibrosis in Egypt: a multicenter case-control study.	Awadalla NJ	Int J Occup Environ Med
2013	Risk factors for idiopathic pulmonary fibrosis in Southern Europe: A case-control study. (abstract only)	Paolucci G	ERS
2014	Effects of smoking, gender and occupational exposure on the risk of severe pulmonary fibrosis: a population-based case-control study.	Ekström M	BMJ Open

Table 2: Previous IPF case-control studies looking at occupational exposure

References

- 1 William D. Travis, Ulrich Costabel, David M. Hansell, Talmadge E King, Jr, David A. Lynch, Andrew G. Nicholson, Christopher J. Ryerson, Jay H. Ryu, Moisés Selman, Athol U. Wells, Jurgen Behr, Demosthenes Bouros, Kevin K. Brown, Thomas V. Colby, Harold R. Collard, Carlos Robalo Cordeiro, Vincent Cottin, Bruno Crestani, Marjolein Drent, Rosalind F. Dudden, Jim Egan, Kevin Flaherty, Cory Hogaboam, Yoshikazu Inoue, Takeshi Johkoh, Dong Soon Kim, Masanori Kitaichi, James Loyd, Fernando J. Martinez, Jeffrey Myers, Shandra Protzko, Ganesh Raghu, Luca Richeldi, Nicola Sverzellati, Jeffrey Swigris, Dominique Valeyre, and A. T. S/E. R. S Committee on Idiopathic Interstitial Pneumonias . An official american thoracic society/european respiratory society statement: Update of the international multidisciplinary classification of the idiopathic interstitial pneumonias. *Am J Respir Crit Care Med*, 188(6):733–748, Sep 2013. doi: 10.1164/rccm.201308-1483ST. URL <http://dx.doi.org/10.1164/rccm.201308-1483ST> .
- 2 M Turner-Warwick. In search of a cause of cryptogenic fibrosing alveolitis (cfa): one initiating factor or many? *Thorax*, 53 Suppl 2:S3–S9, August 1998. ISSN 0040-6376.