

from silicosis. Misdiagnosis may led to important individual and societal costs, because of the different patient management approaches in terms of treatment and fitness for work. We present a series of silicosis cases previously misdiagnosed as sarcoidosis; we hope to increase awareness among respiratory physicians about the pivotal role of a thorough occupational history in the differential diagnostic process.

Method Between April 2016 and April 2018, 3 men previously diagnosed with pulmonary sarcoidosis were referred to the Occupational Lung Disease service at Royal Brompton Hospital, London, UK to evaluate their fitness for work; all were stonemasons in the UK. A thorough lifetime job history was collected, and combined with the available clinical evidence (i.e. spirometry, radiology, BAL and/or lung biopsy).

Results A summary of the patients is reported in the table 1. In each case, based on the available medical evidence and significant occupational exposures to crystalline silica for over 10 years, a diagnosis of silicosis was reached. Each was advised to avoid further exposure to silica at the workplace, and informed about their eligibility to claim for compensation under the UK Industrial Injuries Disablement Benefit scheme. Of note, cessation of occupational exposure to silica in one of the patients resolved his chronic cough, so that medication was no longer required.

Conclusions Given the chronic nature of silicosis, and the absence of a curative treatment, timely diagnosis is essential to prevent further exposure to the causal agent and so disease progression; to avoid not only unnecessary invasive diagnostic procedures, but also unneeded medications; and to give access to workers' disability compensation.

P146 CLEANING PRODUCTS AND RESPIRATORY HEALTH OUTCOMES IN PROFESSIONAL CLEANERS: A SYSTEMATIC REVIEW AND META-ANALYSIS

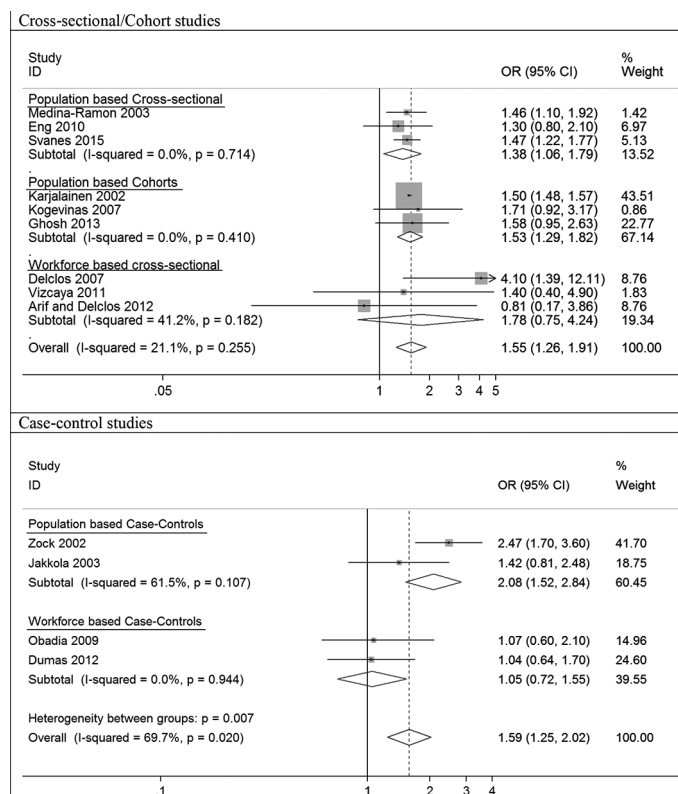
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Introduction/objectives There is consistent evidence of increased respiratory health effects in professional cleaners; however, uncertainty remains on underlying causal agents, mechanisms, and respiratory phenotypes. We aimed to conduct a systematic review and meta-analysis of the available literature to characterise and quantify the impact of the cleaning-related respiratory health burden.

Methods We searched MEDLINE and EMBASE database and included studies that evaluated the association of at least one respiratory health outcome with exposure to cleaning products in adult professional cleaners. GRADE was used to appraise the quality of included studies.

Results We retrieved in total 897 articles, and after applying our inclusion criteria, 33 remained in the final review. The meta-analyses of population based cross-sectional and cohort studies showed positive associations between cleaning exposure and asthma risk: odds ratio (OR)=1.38 (95%CI: 1.06–1.79) ($I^2=0.0\%$) and OR=1.53 (95% CI: 1.29–1.82) ($I^2=0.0\%$), respectively (figure 1). Workforce studies were of lower precision with no overall statistically significant risk. Risk estimates were generally higher for self-reported, than for objectively assessed asthma. Very limited association was observed for exposure to cleaning products and rhinitis risk, whereas a significant association was found for chronic obstructive



Abstract P146 Figure 1 Meta-analyses of studies assessing associations of cleaning profession with asthma (classified by study design)

pulmonary disease (COPD) risk in two large cross-sectional studies. There was conflicting evidence for an association of bronchial-hyper-responsiveness (BHR) with cleaning agent exposure which was particularly prominent to ex-smokers. Cleaners did not show a typical atopic respiratory phenotype, nor increased fractionated exhaled nitric oxide (FENO).

Conclusions All studies lacked quantitative exposure assessment to cleaning products, but inclusion of such measures in further large prospective studies would help elucidate underlying causal mechanisms.

P147 ORIGIN OF REFERRALS SEEN BY OCCUPATIONAL PHYSICIANS WHO REPORT WORK RELATED ASTHMA

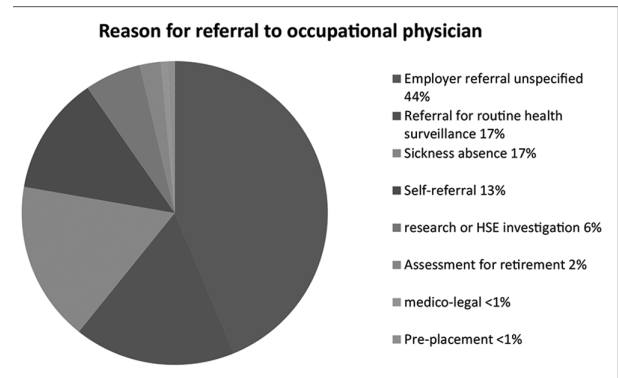
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Introduction and objectives Regulations published by the Health and Safety Executive (HSE) UK advise health surveillance programmes for some workplaces. Little is known about the proportion of work related asthma cases diagnosed by the health surveillance route. This study aims to investigate the origin of referral to occupational physicians (OP's) who then report work related asthma.

Methods Incident cases of work related asthma reported to The Health and Occupation Research (THOR) network between 2006 and 2017 were extracted. For each case, OP's provide the diagnosis, age and gender, occupation, industry, suspected causal agent(s), and reason for referral. Data for occupational asthma cases from OP's was examined with reason for referral.

Results 135 of 137 asthma cases reported by OP's documented reason for referral, of which:- 71 were males (52%) and with an average age of 42.8 years (range 19–67 years). Reason for referral: 59 (44%) employer referral reason not specified, 23 (17%) routine health surveillance, 23 (17%) sickness absence, 17 (13%) self-referral, 8 (6%) research or HSE investigation, 3 (2%) assessment for early retirement, 1(<1%) medico-legal, 1(<1%) pre-placement.



Abstract P147 Figure 1 Cases of work related asthma by referral route to occupational physicians, as reported to SWORD, 2006–2017

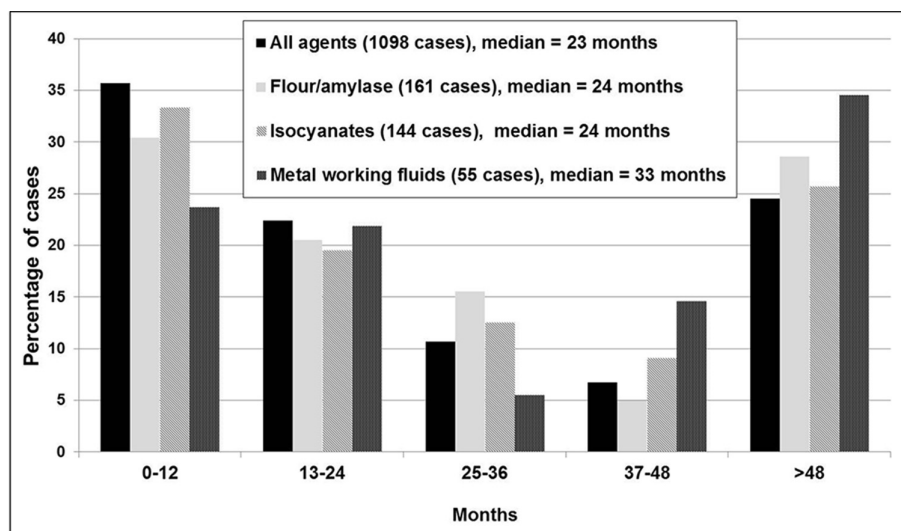
Conclusions In over 2 out of 5 cases of work related asthma reported by OP's, the reason an employer referred the case remains unclear; however at least 1 in 6 cases of work related asthma were referred to occupational physicians based on health surveillance. The same number of cases was reported from health surveillance as sickness absence. Further interrogation as to why an employer refers a case may influence these figures thus they are likely to be a minimum estimate of cases found by health surveillance by OP's. It is not known how many subjects in total have undertaken health surveillance to find these cases.

P148 FACTORS DETERMINING THE LENGTH OF TIME BETWEEN ONSET OF SYMPTOMS AND PHYSICIAN CONSULTATION FOR OCCUPATIONAL ASTHMA

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Introduction and objectives Occupational asthma continues to be a significant and costly problem in the UK. The earlier asthma is diagnosed and exposure removed the better the



Abstract P148 Figure 1 The length of time between onset of symptoms and consultation with a chest physician for occupational asthma – overall and for selected agents, as reported to SWORD, 2006–2017

Correction: P146 Cleaning products and respiratory health outcomes in professional cleaners: a systematic review and meta-analysis

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