

Work Up And Management Of Work Related Asthma: How Are We Doing?

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Rationale: Work related asthma (WRA) causes significant morbidity as well as adverse social and economic impact. Earlier studies have reported a lack of awareness among the physicians regarding the importance of work place exposures. This often leads to inappropriate management of patients with WRA. The current study evaluated the trends in the diagnostic work up and management of Michigan workers with WRA reported over the last two decades.

Methods: The Division of Occupational & Environmental Medicine at Michigan State University administers the WRA surveillance program for the State of Michigan. WRA reports are received from health care professionals and facilities. These reports are followed up with a telephonic interview using a standardized questionnaire regarding the demographic profile, type of profession, respiratory symptoms, and the diagnostic work up for asthma. Copies of pulmonary function test results are obtained. We analyzed these data among workers confirmed as having WRA during the period 1990-2009.

Results

A total of 2920 cases of WRA were reported during the period 1990-2009 (mean age 53 years; M:F 1374,47%:1546,53%). Isocyanates were the most frequently identified exposures (13.1%) causing WRA followed by cleaning products (10.5%) and metal working fluids/ coolants (10.4%). Majority of workers reported persistent respiratory symptoms (2392/2678,89.3%) requiring either similar or more medications than before (2177/2678,81.3%). Nearly a third of the workers (784/2678, 29.3%) were still exposed to the causal agent and a high proportion of these workers continued to have breathing problems (756/784,96.4%) and need asthma medications (674/784,86%). Spirometry was done for nearly three forth's of the subjects. Pre/post bronchodilator testing was done for only 54% of the subjects, methacholine challenge test for 20%, peak flow monitoring in relationship to work in 3%, pre-post work-shift testing in 3% and specific antigen testing in <1%. Only 40% of the subjects had been informed by the doctor that their asthma was work related. A high percentage of subjects had required emergency department (ED) visits (60%) or hospitalization (37%) for breathing problems.

Conclusion

There continues to be a relative lack of awareness among healthcare providers. Many workers are not well informed about their medical condition or its association to work place exposures. Several subjects with WRA continue to work in the same environment. Many subjects do not get basic lung function testing and a majority are not evaluated for reversibility and/or hyper-reactivity. As reflected by the frequent ED visits and hospitalizations, WRA is associated with significant morbidity and high healthcare cost.

This abstract is funded by: NIOSH

Am J Respir Crit Care Med 185;2012:A1180

Internet address: www.atsjournals.org

Online Abstracts Issue