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Title: Occupational asthma and rhinitis in champagne vineyard workers

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Body: Background. Vineyard workers (VW) are exposed to various inhaled respiratory allergens. However, the prevalence and risk factors of occupational asthma (OA) and rhinitis (OR) in Champagne VW have not been studied. Aims. The objectives of this cross-sectional study were to determine the prevalence of OA and OR in Champagne VW and to analyze the relationships between occupational symptoms (OS), occupational exposure and sensitization profile. Methods. Champagne VW were recruited from the Department of Occupational Medicine in May and June 2010. Demographic and occupational characteristics were recorded. Nasal and respiratory symptoms were scored for each month of the past year. OS were defined by symptoms related to work exposure. Diagnosis of asthma was based on symptoms. Skin prick tests (SPT) were performed for common respiratory allergens, grape mould (botrytis) and grape pollen. FEV1/FEV6 ratio was measured. Results. Sixty-six patients were included. The prevalence of rhinitis and asthma was 38% and 13% respectively. The prevalence of OR and OA was 21% and 3% respectively. SPT showed sensitization for gramineae (18%), D. pteronyssinus (12%), D. farinae (11%), vine pollen (11%), botrytis (5%). Compared to VW without OS, VW with OS were more frequently sensitized to betulaceae (20% vs 2% respectively, p=0.03) and were involved in the activities of disbudding, straightening and/or hooking (35% vs 6% respectively, p=0.04). OS were present in May and June only for 67% of patients, corresponding to disbudding, straightening and hooking. Conclusion. The prevalence of OR in Champagne VW is high, whereas OA is relatively rare. OA and OR are associated with a sensitization to betulaceae and with direct exposure to vine.