

Occupational asthma due to exposure to rhesus monkey

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Introduction: A common cause of occupational asthma is exposure to animal proteins. Knowing this, laboratory workers are at risk when they work with laboratory animals (e.g. mice, rats, guinea pigs, rabbits). No reports were made up to date of allergy to rhesus monkey.

Methods: We used all available information of the medical file of the patient. The patient explicitly authorized us to publish her case.

Results: A 28-year-old female experimental animal trainer was referred for suspected occupational asthma. She worked with rhesus monkeys for about 6 years, as a lab technician in a university neurophysiology lab, performing mainly cognitive testing. She had daily contact with the test animals. The animals were living on sawdust.

The patient experienced respiratory symptoms 2 years after she started working on the experimental lab. She had progressive wheezing and non-productive cough. The respiratory symptoms were accompanied by irritation of eye and nose mucosa, itching papules on forearms with accidental blood splashes or scratch injuries by the monkeys, spontaneously disappearing after 10 minutes.

Specific IgE test to rhesus monkey was not available; screening to other possible (extra-) professional exposed allergens was negative. Her total serum IgE was not elevated (55 kU/L), blood eosinophil count was elevated (0.3×10^9 ; 6.9%). Spirometry showed supra-normal volumes and normal exhaled nitric oxide (FENO 16.40 ppb at flow of 50 ml/sec). Histamine provocation test showed a mild bronchial hyperreactivity ($PC_{20}=1.47$ mg/ml). Serial peak expiratory flow recordings performed were suggestive of occupational asthma (OASYS-score=3.67).

We did not perform skin prick testing with rhesus monkey saliva, blood, urine or hairs (epithelium) because of ethical reasons (possibility of infectious contaminated material). So we decided to perform ex vivo testing (basophil activation test).

Conclusion: This is the first case demonstrating the possible role of rhesus monkey exposure in the development of occupational asthma.