and periorbital angioedema. Symptoms rapidly progressed to facial urticaria and angioedema, rhinorrhea, throat tightness, and dyspnea. She had difficulty speaking, repeatedly attempted to clear her throat, and expressed feelings of impending doom. There was no coughing or audible wheezing.

Treatment within 20 minutes included diphenhydramine 25 mg, followed by nebulized albuterol at an urgent care clinic. Although her vital signs were not available, her mother denied she had low blood pressure. The symptoms resolved within two hours without recurrence. Epinephrine and corticosteroids were not administered.

She has since avoided guinea pig exposure and has had no further symptoms other than those related to EIA. She reported previous casual exposure to guinea pigs without adverse reaction, but had not kept any rodents as pets. She denied symptoms on previous exposures to dogs, cats, and other caged rodents.

Her past medical history was significant for episodic bronchitis, croup, sinusitis, and migraine headaches. She had no history of perennial or seasonal rhinitis. Her only medication was propranolol for migraine prophylaxis. Prior and current spirometry was normal. An exercise challenge within the past year was consistent with EIA. Physical examination, at the time of the evaluation, was significant for allergic shiners and pale, swollen inferior nasal turbinates. Her lungs were clear, and the remainder of her examination was normal.

Case Two

A 24-year-old female smoker with allergic rhinitis, EIA, and known cat-induced rhinitis was evaluated for a several year history of perennial rhinitis and conjunctivitis. She also described an episode of severe allergic symptoms resulting from guinea pig exposure. Within minutes of cleaning her pet guinea pig's cage, she developed throat tightness, severe dyspnea, and anxious feelings. She denied coughing, wheezing, and urticaria. A feeling of "impending doom" was not specifically stated. Her symptoms resolved spontaneously one hour after departing outdoors. She did not take medication or seek medical attention.

Her past medical history was significant for irritable bowel syndrome and gastroesophageal reflux disease. Daily medication included sertraline, nasal fluticasone, and oral contraceptives. Physical examination was significant for bilateral serous otitis media and edematous nasal turbinates. Her lungs were clear, and the remainder of her examination was normal. Spirometry was equivocal due to submaximal effort.

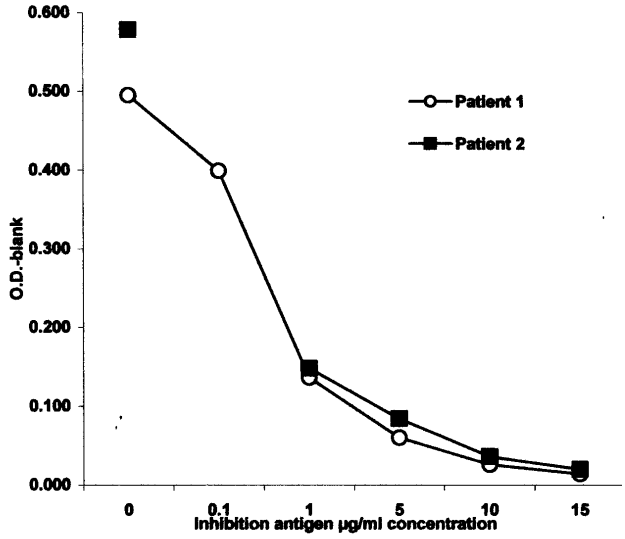

Figure 1
ELISA inhibition assay with guinea pig allergen resulted in complete absorption of specific IgE antibody in both patients.

Methods

Case One

Commercial radioallergosorbent testing (RAST) [Quest Diagnostics, San Juan Capistrano, CA] was performed to a variety of animal and environmental antigens. Animal antigens included dog, cat, cow, gerbil, goat, hamster, horse, mouse, rabbit, rat, sheep, swine, and guinea pig. Environmental allergens included common pollens and molds, as well as dust mites. Percutaneous skin testing was not performed due to concurrent usage of beta-blocker medication.

Case Two

Percutaneous skin testing with a variety of environmental allergen extracts (Greer Labs, Inc., Lenoir, NC), including cat, dog, and guinea pig antigens, was performed using DermaPIK (Greer Labs, Inc., Lenoir, NC). Histamine and albumin-saline controls were included. Commercial RAST testing was not performed.

Both Cases

Sera from both patients and three non-atopic, adult controls were assayed for specific IgE to a freshly prepared extract from the fur of a guinea pig by enzyme-linked immunosorbent assay (ELISA) as previously described [6]. The guinea pig antigen was prepared by extracting 46 mg of fur with 7.5 ml of sterile phosphate buffered saline (PBS) incubated overnight at 4°C. The extract demonstrated 40 µg/ml of protein by bis-cinchoninic acid (BCA)