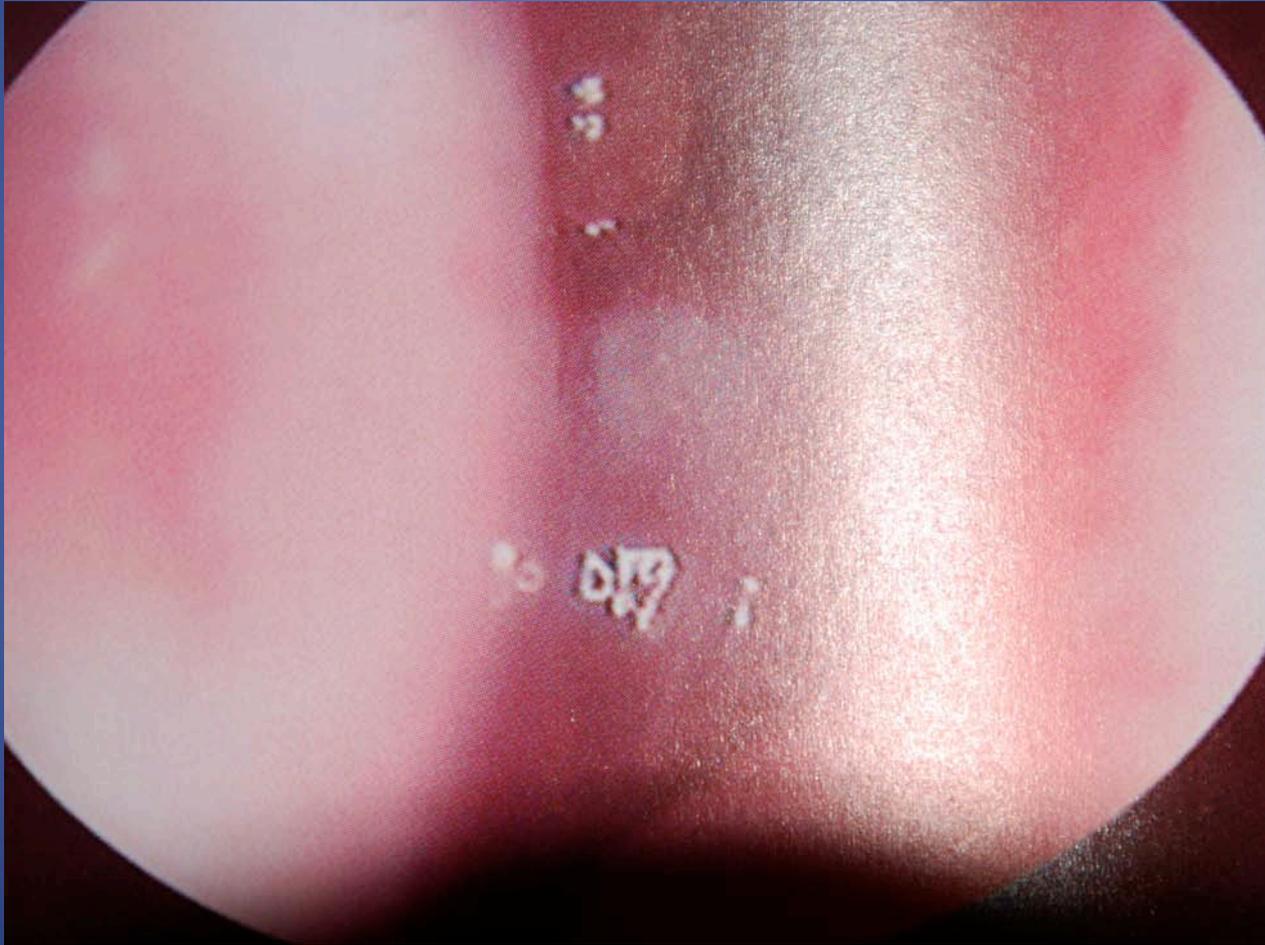


When asthma is hard to treat



Disclosures

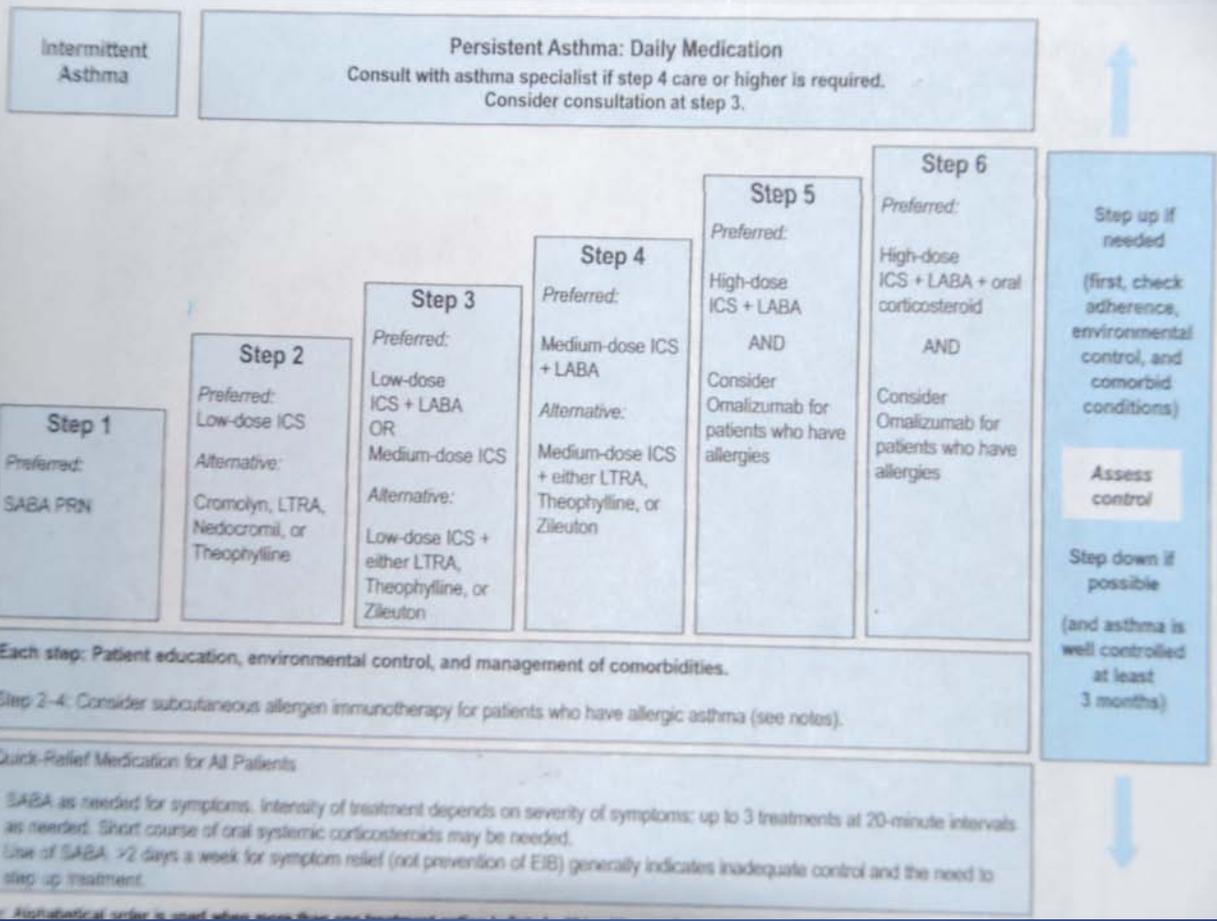
- None

Patient History

- 53 year old male life hx of asthma
- He also has GERD treated by GI doc and recurrent sinus
- Med Symbicort 160 ug, theophylline 200 to 400 mg daily , singulair no difference
- Skin test pos. grass, cedar tree and tumbleweeds hx IT no benefit

continued

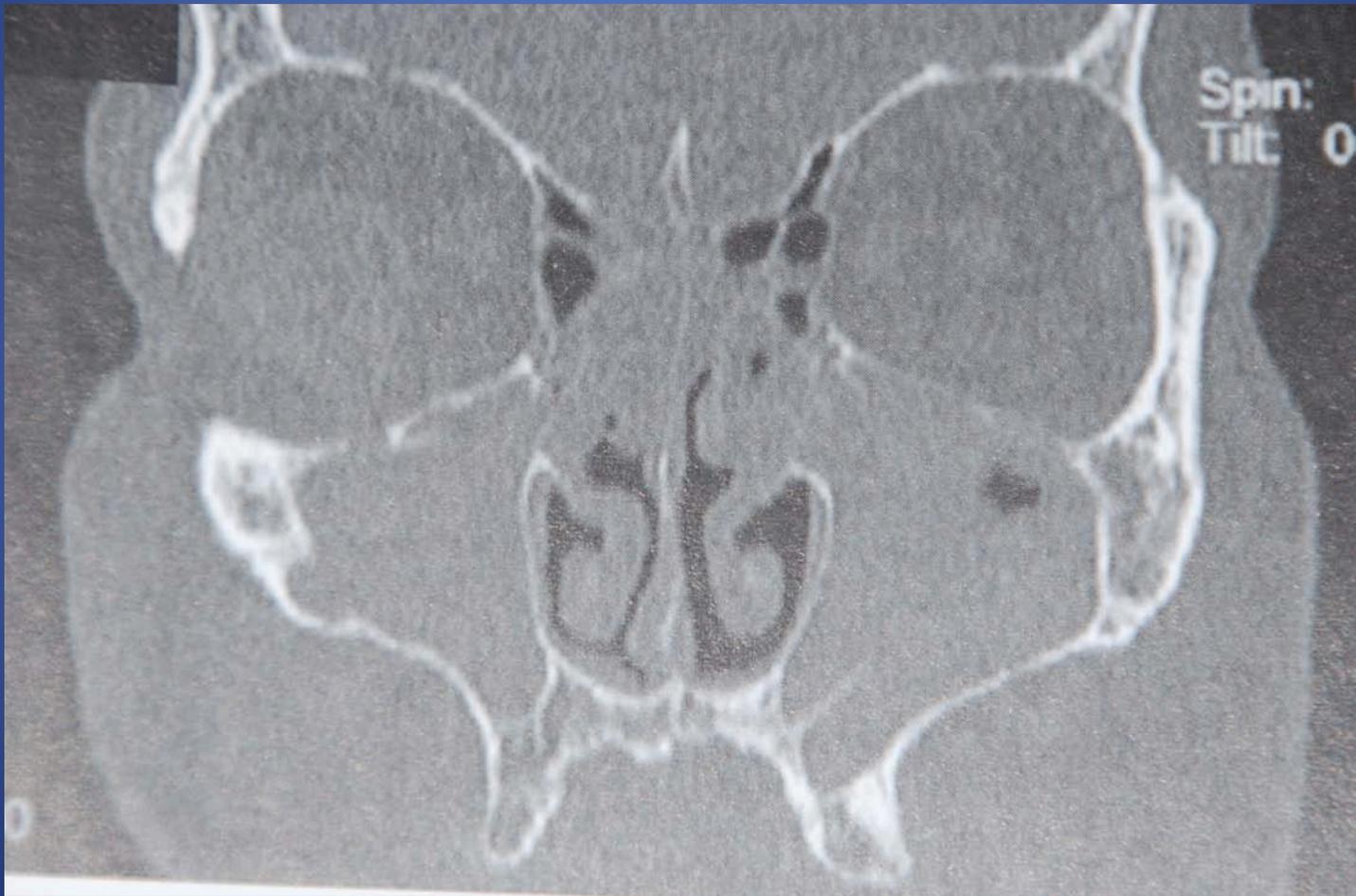
- IgE level 278
- Pulmonary lung function FEV and FVC 52% of predicted
- Asthma becoming increasingly severe over the summer required 20mg to 40 mg a day to control
- What to do? How to manage?



Reason for poor compliance

- Does not care
- Does not understand
- Fear of side effects
- Medicines too expensive
- Believe that other systems of health care are superior

Sinus Infection



Sinusitis, polyps, and asthma

- One study 201 patients with asthma & CT scans
- 136 were abnormal 68%
- 18 with Bone involvement
- Associated with eosinophilia

- Mayo Clinical Proceeding , Meth et al, June 2008 83

ASA sensitive Asthma

- Sensitivity to all of the NSAID Cox 2 inhibitors have less crossreaction
- Nasal polyps and usually severe sinus disease
- Asthma sometimes severe
- Usually require some type of cortisosteroids for treatment
- ASA desensitization helps with nasal polyps

Does it help to treat sinus or nasal polyps

- Many patients with polyps feel yes
- Some uncontrolled studies showed that treatment of sinus infection or sinus surgery have been beneficial
- One study showed that addition of nasal steroid in ER decreases the return rate

GERD and ASTHMA

- 402 poorly controlled with asthma no or minor GERD symptoms
- Esomeprozol 40mg vs. Placebo
- 40% had a positive PH probe
- No difference in adverse events, urgent care visits, rescue medication and asthma evaluation

No difference in secondary end points

NEJM, Mastronde et al 2009, April 360(15)

Pp1487- 1499

ASTHMA and GERD

- In individuals with asthma and symptomatic GERD
- Lansoprazol 30 mg BID
- Daily symptoms no change
- Fewer exacerbations and this result was more pronounced in the more severe asthma

Chest 2005, Sept., 28(3)

ASTHMA, GERD, and NOC

- Looked at asthma and GERD and then a third group with nighttime symptoms
- 770 patients , esomeprozol 40mg BID
- This study showed improvement in pulmonary function PEF in treated
- Most Significant in Patient with GERD/NOC
- More pronounced in severe patient with LABA

Anti-cholinergics in asthma

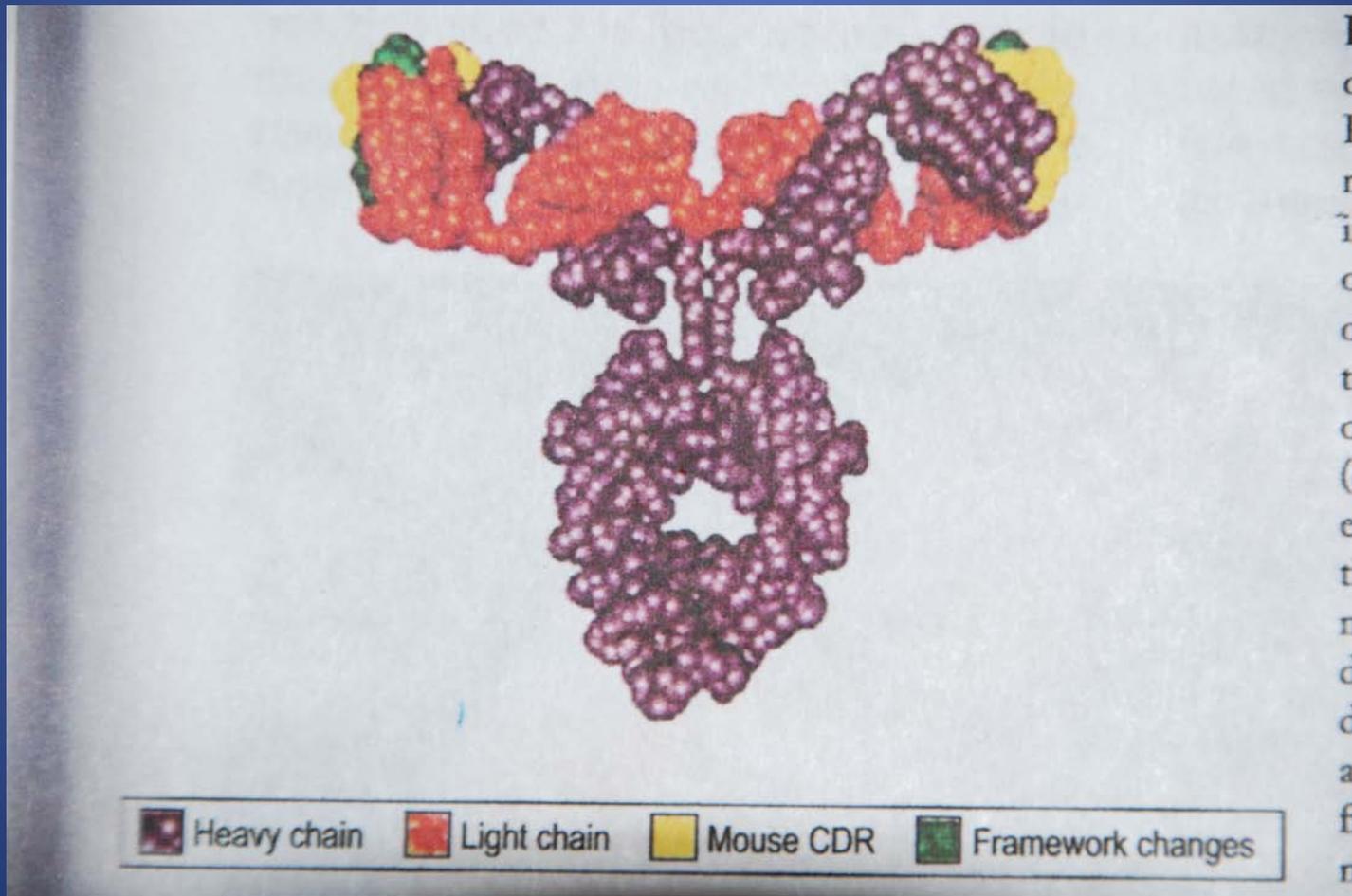
- A study looking add on therapy tiotropium 18ug salmetrol 50 ug BID or doubling inhaled cortisone 160 ug dose
- Similar design to the studies showing benefit of adding LABA
- Results were looking at PEF and FEV1, QOL and asthma scores

Anti-cholinergics in Asthma

- Adding tiotropium was more effective than doubling the dose of Inhaled cortisone
- Reported no worse than adding LABA

- Peters, et al, NEJM Oct. 10, 2010, 363:18

Anti IgE



Indications for anti IgE

- Indications: severe uncontrolled asthma
- Usually steroid dependent asthma
- Allergic asthma: positive allergy testing
- IgE level 30 to 700
- Dosing is dependent of weight and IgE level
- Cost \$4000 to \$20,000 per year

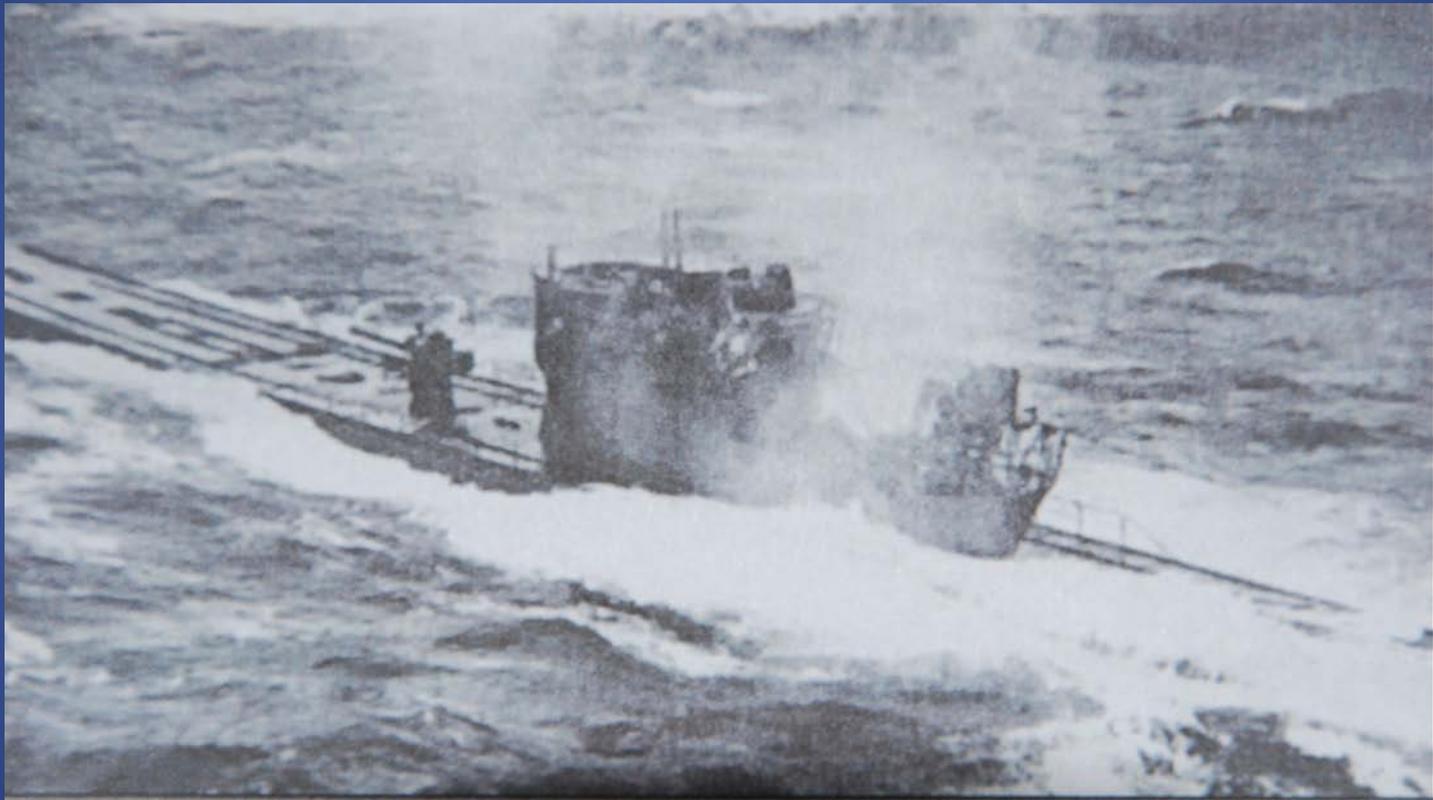
Omalizumab mechanism of action

- Decrease serum IgE
- Decreases expression of Fc epsilon RI receptors (mast cells, basophils)
- Decreases FeNO
- Decreases eosinophils
- Decreases B lymphocytes and IL13
- Decreases airway inflammation
- Decreases antigen induced mediators release

Middleton's Allergy vol. 2 page 1683

Summary of Anti IgE effects on asthma

- Decreased exacerbations
- Decreased inhaled corticosteroids doses
- Decreased asthma symptoms
- Decreased rescue medications
- Increased QOL
- Decreased ER visits
- Decreased hospitalization
- Middleton's Allergy 7th edition p. 1684



under attack from US aircraft. The two flakvierling appears to be pointed in
under attack by more than one aircraft.

Effectiveness of anti-IgE

- Study as add on therapy 419 mod to severe
- 44% reduction in ER visits
- Improved QOL
- Improved asthma symptom scores

- Middleton's Allergy 7 th edition p 1685

Effectiveness of Anti IgE

- Pooled of study 4308 total patients
 - 2511 on Anti IgE
 - 38% fewer exacerbations
 - 47% fewer ER room visits

- Middleton's Allergy 7th edition, p 1683

Anti IgE side effects

- Local reactions
- Concerns about cancer
- Concerns about heart disease
- Delayed anaphylaxis 0.1 % two to four hours after the injection any injections
- Personal experience on case of vasculitis
- A drug to used by specialist my opinion

Pet danders

- 15 year old female
- Poorly controlled asthma
- On all of the medications Advair 250 ug,
- singulair
- Brother worked with horses

Rx was Immunotherapy to horse dander

Facts about pet dander

- Estimates 37% of homes have dogs
- And 32% of homes have cats
- 4% had birds
- % of indoor pets is increasing
- One study showed that neither the length of cats hair nor indoor time effected levels
- Cats most common pos. 72% (dog 36%)
- ALLER,&ASTHMA PROCEEDING sept 2010,319(5)
- p, 382

Pet allergy

- Animal dander small 2.5 to 10 um more likely to cause asthma symptoms
- Passively transferred on clothing shoes and even women's hair
- Therefore dander is found in more than 90% home and public areas
- Allergy & Asthma Proceeding Nov/Dec. Vol 30(6) p.574

Pet allergy continued

- 46% of homes with or without cat have 2 ug/ml of Fel d1.
- Middle schools 1.5 to 3.0 ug of Can f1
0.5 to 1.1 ug of Fel d1

Daycare centers have >8 ug of Fel d 1 in sandboxes

Allergy and asthma Proceeding Nov/Dec 2009

P 574

Treatment of pet allergies

- What can be avoided should be avoided
- More effective
- Safer
- Less expensive
- Best to remove pet from home
- Garage may be the same
- Reduce dander levels up to 10 times

Pet Allergy Treatment

- Confining cat to an uncarpeted room (other than bedroom) with a Hepa filter may disseminate dander 90%
- Carpeted floors capture 100 times more cat allergen than polished floor
- Upholstered furniture and curtains contain equal of cat dander
- Allergy & Asthma Proceedings vol30, nov dec 2009 p576

Pet allergy avoid

- Require passive carriers of animal dander to change clothes
 - Wear face mask before exposure
 - Select a female pet or require neutering
 - Wash hands and face after exposure (never studied)
-
- IBID p. 577-578

Pet avoidance

- Limit or remove fabric upholstered furniture
- Upholstered furniture and curtains contain more dander than floor in schools
- Wash bedding/ curtain well
 - 60 degree with one rinse
 - lower temperature with two rinses
- Ibid p. 577

Treatments that are not proven beneficial

- Portable HEPA not helpful
- Buying a non allergic type of pet
- Short hair vs. long hair or short hair vs. long hair
- Increasing ventilation 6 times per hour
- Washing special shampoos, sprays to reduce shedding and steam cleaning not beneficial
- Ibid p. 577

Leucotriene antagonist for nasal polyps

- Combination of Montelukast and fluticasone 200 ug
- Significant reduction in polyps size at 6 and 12 months of age
- Fluticasone plus Montelukast for for one effective in reducing polyps in adult onset asthma

Nonaka m etal. J. Nippon Med School ,Feb 2010 vol 77