Psocids are small insects known and described as indoor allergens in India and more recently observed in Western countries, particularly in houses built with ecological materials for insulation and heating. The Reims (France) Pulmonary Allergy team led by F. Lavaud describes a rare case of allergic asthma (J. M Perotin et al: *Allergy* early view 22 April 2011) occurring in a 33 year-old woman presenting rhinitis and conjunctivitis for 2 months, recently associated with wheezing cough and - after pulmonary function testing - reversible airway obstruction. She lived in a flat recently insulated with some ecological material (hemp). Antihistamine and inhaled corticosteroid dramatically decreased the symptoms.

The allergy investigation showed skin prick tests and IgEs negative to common airborne allergens, but the patient mentioned little insects in her room, identified as psocids (Liposcelis) by an entomologist. Extracts prepared from these parasites provoked positive skin tests and specific IgEs (negative in control patients, just as they were to tropomyosin from *Dermatophagoides farinae* and cockroaches which could be co-sensitisation responsible with psocids).

These insects are usually found in tree bark or leaves, as well as damp houses, cellars or food hangars (they are called “booklice”). They can also be observed in emerging countries as straw, hemp and hessian parasites, but also as occupational allergens in entomologic or stuffed animal collections.

Few reported observations can be found. This is the first documented case of non-occupational allergic asthma due to this insect behaving like an indoor allergen, whose proliferation is boosted by the use of ecological materials: here, hemp, whose eviction induced a favourable outcome without relapse in 6 years.

Thus, beside dust mites, cockroaches, bees, wasps and other insects,
with psocids the Allergist enlarges his expertise and competence in entomology.

2. Allergens, television and children airway inflammation

**Theme**: Asthma

**Key words**: exhaled NO (FENO), house dust mites, sedentary behaviour, daily hours of TV/video games, physical activity

We know that the fraction of exhaled nitric oxide (FENO) is a marker for airway inflammation and is clinically used to monitor asthma evolution. The Harvard (Boston, USA) medical group has attempted to define the contribution of allergen exposure in children to FENO levels (J.E Sordillo et al JACI May 2011 vol 127 5 1165-1172e5). The study objective was:

1) To evaluate the increase in FENO levels in asthmatic and/or allergic children
2) To evaluate the increase in FENO levels in sensitised and non-sensitised children after allergen exposure
3) To evaluate the children’s sedentary behaviour, through the number of daily hours of television viewing or video game playing, on FENO levels independent of allergen exposure.

On a cohort of 505 children monitored till age 12, with a parental history of asthma or allergy, the following parameters were measured: bed dust allergen levels (dust mites, cats, and cockroaches), corresponding specific IgEs, respiratory status (rhinitis, asthma or wheeze) with functional assessment, bronchodilation tests, and FENO levels. Finally, a questionnaire noted the number of hours per day spent on television viewing or video game playing (for weekdays and weekends).

The results were as follows:

FENO levels increased in subjects with current asthma (32.2 ppb), wheeze (27.0 ppb) or rhinitis (23.2 ppb), compared with subjects without these respective symptoms (16.4-16.6 ppb, P ?.005).

Sensitisation to indoor allergens (cat, dog, dust mite) predicted higher FENO levels and explained 1/3 of the variability in their levels.

FENO levels were highest in children both sensitised and exposed to house dust mites.

Finally greater than 10 hours of weekday television viewing or video game playing was associated with a significant FENO level increase, regardless of allergen exposure, body mass index (BMI) and allergen sensitisation.

In conclusion, allergen exposure and excessive TV viewing can cause child airway inflammation as measured by FENO levels. This emphasizes once more the role of environmental conditions on the immune response,
and particularly here the sedentary behaviour which reduces physical activity, increases calorie intake and food consumption.

3. Anaphylaxis during anaesthesia in France

Theme: drug allergy, allergy due to anaesthesia

Key words: neuromuscular blocking agents (NMBAs), latex, antibiotics, man, woman, child, pholcodine

The French Group devoted to anaphylactoid reactions during anaesthesia (P. M Mertes, JACI ahead of print 2011 19 avril) is once more drawing our attention to the subject. This group which consists of 31 French regional centres (including Jacques Gayraud’s) has colligated all over France 7 million anaesthesias which, combined with the Drug Safety Monitoring data bank, has led to a assessment of anaphylactic reactions between 1998 and 2004 on the part of 2516 patients, including 266 children and teenagers.

These reactions were classified into 4 severity grades, most of them of grade III, i.e. with cardio-vascular manifestations, rhythm disorders, bronchospasm, whereas grade I, the most frequently non-IgE dependant, was marked only by skin reactions. The diagnosis of immediate reaction to IgE, as confirmed by histamine and trypsin dosages, was established in nearly 72.18% cases (1816 cases, i.e. 72.18%).

The most frequent cause was neuromuscular blocking agents (NMBAs): 1067 cases, i.e. 58%, of which 356 for Suxamethonium or succinylcholine (Celocurine®), and 313 for Rocuronium. Second came latex (361 cases, 19.65%), then antibiotics (236 cases, 12.85%).

The median annual incidence rate per million procedures was higher for females 154.9 (5th-95th percentile, 117.2-193.1) than for males : 55.4 (5th-95th percentile, 42.0-68.0). It even reached 250 (189.8-312.9) for women in the case of allergic reactions to NMBAs.

With children, the IgE-dependent anaphylaxis diagnosis was obtained in 122 cases, i.e. 45.9%, less frequent with age 2-12 subjects than those aged 16-18. Most common causes were: latex (explained by the few cases of spina bifida but mostly by former use of medical material), NMBAs and antibiotics; in contrast with adults, no female predominance was observed.

On the whole, the incidence of more or less severe allergic reactions, estimated on a national basis, was higher than expected; the similar incidence of reactions according to sex before the teenage years leads the authors to suggest a role for sex hormones in the increase in adult anaphylaxis accidents observed in women.

Finally, let us recall the role of Pholcodine should be remembered in sensitisation to NMBAs, hence the French health authority’s recent recommendation to only provide on prescription the 20 or so cough
mixtures which contain this drug.

4. Vitamin D deficiency in the USA and risks of allergy
Theme: atopia
Key words: vitamin D, specific IgEs, peanut, ragweed, oak

A number of preliminary studies have shown a possible link between low vitamin D levels and atopic diseases, and emphasized the immunomodulator and anti-inflammatory role of this vitamin. But S. Sharief et al. from Chicago (JACI 2011 127 5 1195-1202) wanted to go further and evaluate the relationship between vitamin D and allergen-specific IgE serum levels. For this purpose, they used a national survey on nutrition and health problems in a US nationally representative sample of 3136 children and adolescents and 3454 adults, monitored between 2005 and 2006. They measured serum vitamin D levels (25 Hydroxyvitamin D, 25(OH)D) in cases of deficiency (<15 ng/ml) and insufficiency (15-29 ng/ml) and compared them to levels of specific IgE to 17 different allergens after adjustment for potential confounders, i.e. age, sex, ethnicity, obesity, socio-economic status, frequency of milk intake, daily hours spent watching television, playing video games or using a computer, serum cotinine levels, and vitamin D supplement use (by prescription). Results were as follows:
In deficient children and teenagers, sensitisation to 11 of the 17 tested allergens was more common than in controls. Compared to normal vitamin D levels (=30 ng/ml), and after multivariate adjustment, deficiency was significantly associated to an allergy, mainly peanut, ragweed and oak. Eight other allergens were associated to vitamin D deficiency with less significant P values (less than 0.5 but greater than 0.1).
In adults, by contrast, there was no association between 25(OH)D levels and allergic sensitisation.

In conclusion, vitamin D deficiency is indeed associated in the US child and adolescent to allergenic sensitisation. Since vitamin D deficiency and prevalence of allergic manifestations are increasing in the USA, this US-representative study points to a link between these two phenomena.

5. Vocal cord dysfunction (VCD), a diagnosis and therapy trap
Theme: asthma
Key words: vocal cord dysfunction (VCD), digitalised dynamic tomography

A paradoxical adduction of the vocal cords, above all during inspiration, VCD causes an obstruction of upper airway which can simulate asthma (and is thus often the source of useless treatments)
or combine with asthma, which complicates both diagnosis and therapy. L.M.Gimenez and H.Zafra (Annals of All.Asthma,Immunol 2011 Apr 106 267-274) present an excellent overview of the subject, on the basis of the publications of the past 8 years. M.J.Morris and K.L.Christopher (Chest 2010 Nov.138 1213-1223) had also recently drawn attention to this often forgotten vocal cord functional abnormality and recalled the clinical, functional and endoscopic criteria of the trouble. The Australian pneumologist group from Melbourne University Hospital, in a 110-page article with 90 pages of tables, graphs and figures (K.Low et al AJRCCM 2011 ahead of print 31 Mars) stress that VCD is one of the reasons why certain asthmatics are difficult to treat, that it is uneasy to evaluate by simple endoscopy, admittedly the ‘gold standard’ for diagnosis but ill- tolerated by asthmatics, and they propose an original technique based on dynamic 320-slice computerised tomography (CT).

46 chronically asthmatic patients, under usual treatment, aged 18 to 65, with a majority of women (36 vs 9 men), were involved in their study. Previously, and with the same technique, they had developed in 15 healthy volunteers an analysis algorithm, twice validated in 7 subjects, allowing them to quantifying the vocal cord function and the ratio of VC diameter to the tracheal diameter, over the breathing cycle.

The results were as follows:
Vocal cord movement was abnormal with excessive narrowing in 23 of 46 subjects (50%) and severe in 9 others (19%) (over 50% abnormality both for inspiration and expiration times).
Moreover, images also revealed general laryngeal dysfunction characterised by an abnormal larynx movement, rather than isolated vocal cord disorder.
Thus, thanks to the non-invasive quantification by dynamic computerised tomography it is possible to observe that significant numbers of patients with difficult-to-treat asthma had excessive narrowing of the vocal cords and upper-airway dysfunction.

Comments and questions welcome:

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