

The difference between skin prick and patch tests

-Dr Shefali Patel

As a GP, if you suspect any food or aeroallergen (pollen sensitivity) e.g. history of anaphylactic reaction or itchy rash after ingesting any particular food, allergic wheeze etc, one needs to refer for skin prick testing to **ALLERGY CLINICS**. Commonly suspected in atopic children e.g. with eczema and asthma. Usually children grow out of food allergies and hence only small percentage of adults have genuine food allergy. Skin prick testing involves scratching the forearm skin and exposing those areas to different allergen solutions prepared using diluted food or aeroallergens which are biologically standardised and reading the wheal and flare reaction after 15min.

Rational for skin prick testing

.....GOING BACK TO IMMUNOLOGY IN MEDICAL SCHOOL.....

Mast cells line the skin, lungs, gut, nose and eyes. These cells are primed to kill worms and parasites and contain granules filled with irritant chemicals including histamines. They have large number of receptors for specific IgE. When a mast cell encounters an allergen that the IgE on its surface recognises, the interaction between antigen and antibody causes the mast cells to degranulate and release a large number of mediators.

Histamine is the prominent one which causes the wheal and flare reaction suggestive of **CLASSICAL TYPE I HYPERSENSITIVITY** reaction within 15 min.

However, if you suspect chronic hand eczema or allergic eczema or resistant rash in adults, patch tests would be useful and those adults (minority of children) needs referral to **DERMATOLOGY CLINICS** for it. This usually involves applying patches of different allergens on the back and leaving them in situ for 2-3 days before measuring the rash if developed thus finding the allergen e.g. nickel sensitivity.

Rational for patch testing

Allergic sensitisation to chemicals is detected by application of the suspected substance. Positive reactions are **LEUCOCYTE MEDIATED DELAYED TYPE** reactions that develop over 34-72 hrs. Screening is performed with the European Standard Battery, a collection of up to 34 chemicals which represent the commonest environmental sensitisers.

Local paediatric allergy clinics are based at St Mary's hospital-Paddington, Guy's and Thomas's. Even Warren Hyer (paediatric consultant) at Northwick Park Hospital does skin prick testing for children. Adult allergy clinics are patchy but Guys and St Thomas's is good. For aero allergen testing, ENT clinics in local hospitals are good enough.

Dermatology clinics only deal with patch testing as they informed you.

Overall UK has poor provision of allergy testing and management.

Hope this information helps you to refer appropriately when allergies are suspected.

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