The clinical utility of recombinant component testing for nut allergy in Doha, Qatar

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Rationale:

Component resolved diagnosis is a useful adjunct to allergen-specific IgE testing in the diagnosis and prognosis of food allergy. The State of Qatar has a mixed population of local residents and ex-patriates. Here we report the results of the first year of component testing for hazelnut and peanut allergy in the major specialist Pediatric Allergy clinic in Qatar.

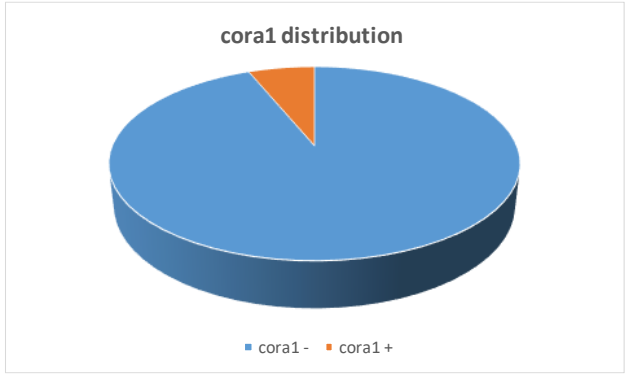
Methods:

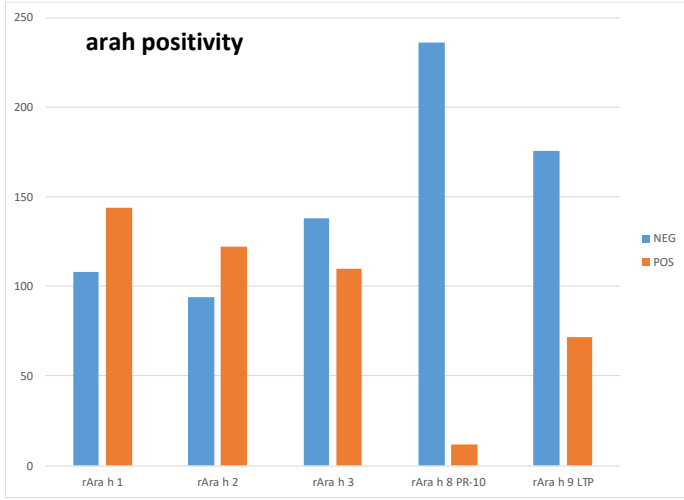
The Laboratory Information System was interrogated to identify all Allergy clinic patients tested for the hazelnut recombinant panel (cora1, cora8, cora9, cora14) and/or peanut recombinant panel (arah1, arah2, arah3, arah8, arah9) from September 2018 to September 2019. Samples were tested using the ImmunoCap assay on the Phadia 250 analyser (Phadia AB, Uppsala, Sweden).

Results:

177 patient samples were tested for hazelnut components, and 245 for peanut components. The most common individual hazelnut components were cora9 (93.1%) and cora14 (54.8%). The most common pattern was for presence of antibodies to both cora9 and cora14, present in 63/173 (36.4%). Only 11/177 patients were cora1 positive (6.2%), all of whom also had positive results for at least one of cora8,9,14.

The most common peanut components were arah1 (58.2%), arah2 (57.2%), and arah3 (46.1%). While 14/244 patients were arah8 positive (5.7%), all these patients also had positive results for at least one of arah1-3. With respect to arah9, 75/245 were positive (30.6%), with 16/75 positive for arah9 alone (21.3%).





Conclusions:

The most common hazelnut components were cora9 and cora14, hazelnut storage proteins, and the most frequent peanut components were arah1-3, indicating primary sensitization. Despite a mixed population including native Qatari's and ex-patriates in the era of frequent international travel, no patients with isolated cora1 or arah8 (PR-10) antibodies were found. This suggests that isolated cross-reactive hazelnut or peanut allergy is extremely rare in our clinic, and consequently in children in the State of Qatar.