

Gummy Shark is Tolerated by Children with Bony Fish Allergy

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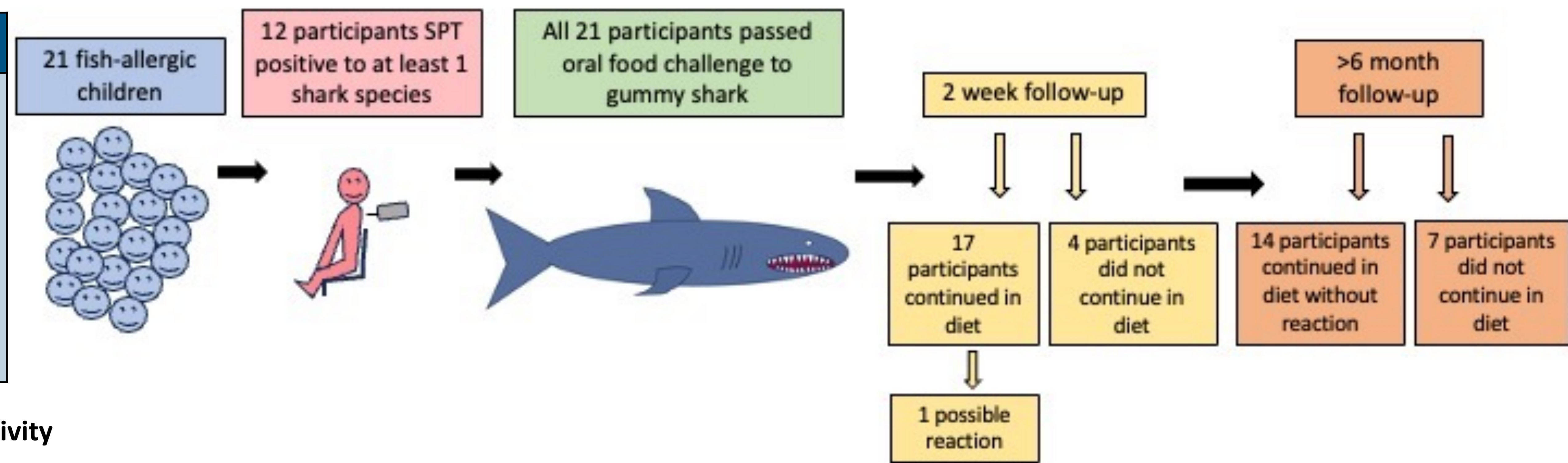


INTRODUCTION

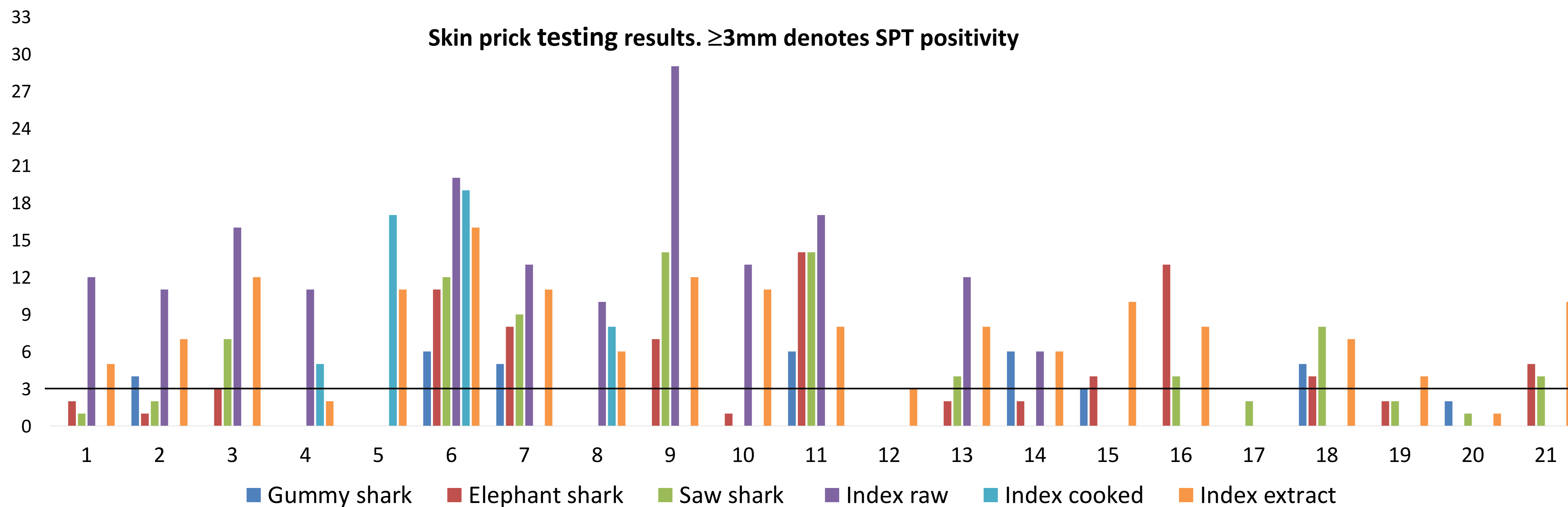
Fish is a common cause of food induced anaphylaxis. Co-sensitisation to bony fish species is common due to shared beta-parvalbumin allergens, leading many fish-allergic individuals to avoid all types of fish. Cartilaginous fish like shark and ray, however, primarily feature alpha-parvalbumin and thus may present a potential for tolerance in bony fish allergic individual. Our study aimed to determine the rate of oral tolerance to gummy shark (*Mustelus antarcticus*) among children with IgE-mediated bony fish allergy and evaluate the predictive value of skin prick testing (SPT) for gummy shark.

METHODS

Children aged 1-18 years with a history of IgE-mediated bony fish allergy within the past 3 years underwent medical evaluation and SPTs to various bony and cartilaginous fish species (using prick-to-prick method with raw, in-house preparations). All participants underwent an open challenge with cooked gummy shark (100g fillet). Follow-up assessments were conducted via phone at 2 weeks and 6 months to evaluate continued tolerance and dietary incorporation.



Skin prick testing results. $\geq 3\text{mm}$ denotes SPT positivity



RESULTS

All 21 children with bony fish allergy successfully tolerated gummy shark during the challenge. 7 (33%) patients had positive SPT results for gummy shark (mean 1.8, SD 2.5). Six months post-challenge, only 14 out of 21 children (67%) continued to eat gummy shark. Reasons for discontinuation included difficulty in sourcing reliable gummy shark, aversion to taste, and one suspected allergic reaction in the community.

CONCLUSION

Allergic children with bony fish allergy demonstrated tolerance to gummy shark. However, SPT for gummy shark showed limited predictive value in this cohort. Furthermore, one-third of participants discontinued gummy shark consumption, citing taste and difficulties in finding a reliable and safe source.

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