case reports
THE CARE GUIDELINES

CASE REPORT

To encourage other practitioners to consider submitting a case report for the E – News, we have restructured the format in line with recommendations from July 2014 and have left in the key guides – should you be interested just e mail info@nutri-linkltd.co. We will send you the word doc.

Case reports are profesional narratives that outline the diagnosis, treatment, and outcomes of the medical problems of one or more patients. Information from case reports can be shared for medical, scientific, or educational purposes. They provide a framework for early signals of effectiveness adverse events, and cost. Case reports and the systematically collected data from which they are written also provide feedback on clinical practice guidelines.

Case Report of a 7 year old girl with Oral Allergy Syndrome (OAS) whose symptoms & signs completely resolved with Nutritional Therapy

Abstract. *Summarise the following information if relevant: (1) Rationale for this case report, (2) Presenting concerns (eg, chief complaints or symptoms, diagnoses), (3) Interventions (eg, diagnostic, preventive, prognostic, therapeutic exchange), (3) Outcomes, and (4) Main lesson(s) from this case report.*

This case explores a nutritional focused approach to the resolution of a case of Oral Allergy Syndrome (OAS) in a 7 year old girl.

Oral Allergy Syndrome (OAS) is a type of food allergy classified by a cluster of allergic reactions in the mouth in response to eating certain (usually fresh) fruits, nuts, and vegetables that typically develops in individuals who also experience hay fever.

OAS is perhaps the most common food-related allergy in adults, and research in 2014 in Australia identified a greater prevalence in children than previously appreciated. In 18 year olds and younger, 14.7% were identified as having OAS. However, different countries may have different incidence rates. OAS represents cross-reactivity between distant remnants of tree or weed pollen still found in certain fruits and vegetables. Therefore, OAS is typically only seen in tree and weed allergic patients, and is usually limited to ingestion of only uncooked fruits or vegetables. However, some antigens are resistant to heating, so a careful inquiry of the history is important in designing the treatment and determining diagnosis.

Another term used for this syndrome is “Pollen-Food Allergy” or “Pollen Food Syndrome” (PFS); the patient is sensitised with pollen via the airways and exhibits an allergic reaction to food antigen with a structural similarity to the pollen (class 2 food allergy). OAS can also be likened with latex fruit-syndrome. Of clinical note up to 60% of all IgE food allergic reactions are due to cross-reactions between foods and inhaled allergens. However, unlike other food allergies, in OAS, the reaction is limited to the mouth, lips, tongue and throat.

OAS is a Type 1 or IgE-mediated immune response, which is sometimes called a “true allergy”. The body's immune system produces IgE antibodies against pollen; in OAS, these antibodies also bind to (or cross-react with) other structurally similar proteins found in botanically related plants.

OAS can occur anytime of the year but is most prevalent during the pollen season. Individuals with OAS usually develop symptoms within a few minutes after eating the food.

Diagnosis in addition to medical history takes into account the positive results of skin tests and elevated allergen-specific IgE antibodies (specific IgE) in serum.

Research shows that the most common sensitising allergen in patients with OAS was birch pollen, and the main food responsible for the presence of the OAS in the mechanism of cross-allergy to pollen was apple.

Key Words. *Provide 3 to 8 key words that will help potential readers search for and find this case report.*

Oral allergy syndrome, pollen food syndrome, IgE allergy, cross-reactivity, mouth, lips, tongue, hay fever.

Introduction. *Briefly summarise the background and context of this case report.*

S.L. is a 7 year old girl, and daughter of an existing client, who had developed hay fever at 5 years of age. The symptoms persisted beyond spring and then she was diagnosed with OAS in June of that year, in 2013. SL's symptoms were red skin around her mouth, swollen lips and runny eyes. Her throat was not affected.

S.L. could not tolerate fruits and could no longer be involved in food preparation at home, which was distressing as the mother used to like to involve her daughter in the meal preparation. The OAS also created a difference at school and did not help S.L. in her friendship groups at mealtimes.

With the elimination of culprit foods and the addition of anti-inflammatory supplements, all signs and symptoms of OAS disappeared within a number of months.

Presenting Concerns. *Describe the patient characteristics (eg, relevant demographics—age, gender, ethnicity, occupation) and their presenting concern(s) with relevant details of related past interventions.*

S.L. is one of two daughters of a family very much into healthy eating, healthy cooking and who encourages 'togetherness' around food and food-times. S.L. is of mixed European descent being half English and half French. She had been very well until the age of 5 when she developed hay fever. She experienced one course of antibiotics when she was 9 months old, and her mother was very keen to only resort to drugs as a last resort. Her sister is not affected by any allergy, and nor are her parents. There are no pets at home. S.L. attends school in north London which is well populated by trees and parks.

S.L. was and is a very bright and cheerful 7 year old, of slight build, who appears to enjoy the process of meeting new people, and has a contagious effect on those around her. Her mother told me she had always been this way.

S.L.'s mother had originally needed to peel all fruit completely to prevent any inflammatory reactions but now even this was not always effective. Peeling fruit whilst wearing gloves may negate the reactivity, because the skin is the part of the fruit to which the immune reaction occurs. Nonetheless, S.L.'s fruit consumption was markedly reduced.

For S.L., the reactivity had become a daily occurrence over the past few months. If S.L. ever came into close contact with a fruit as well as some vegetables (not exactly known which) or a nut, she could have a reaction, even if she did not eat the food, which was a little puzzling. This was now a challenge at school, and making S.L. feel different to her friends and peer group.

Clinical Findings. *Describe: (1) the medical, family, and psychosocial history including lifestyle and genetic information; (2) pertinent co-morbidities and relevant interventions (eg, self-care, other therapies); and (3) the physical examination (PE) focused on the pertinent findings including results from testing.*

There is very little medical history in S.L.'s family to describe, with grandparents still alive and well. There is no family history of allergy. Her mother had suffered from chronic food intolerances and had sought my advice some years before and was now on a gluten free, low grain diet with no dairy products and this style of wholefood diet had resolved her symptoms.

S.L. is a happy child without any particular or known stresses, and she had been at school for some months before she developed hay fever and this was believed to be due to the numerous blossoming trees in and around her school rather than anything else.

The family doctor who had diagnosed OAS, and had confirmation with skin prick testing had recommended an anti-histamine liquid for S.L. The anti-histamine was effective to some degree. However, S.L.'s mother did not want her daughter to take a drug if there was a possibility of addressing the condition with nutritional means.

On examination, S.L. had red skin around her mouth but no other signs or symptoms because she had not been exposed to any fruit in some days prior to meeting with me.

The agreed decision was to focus on an elimination diet of the known culprits, mainly fruit, together with an anti-inflammatory supplement programme which also focused on immune tolerance, and the use of the anti-histamine liquid only when needed. The supplements were kept in a different room to the kitchen so as to avoid the need for S.L. to come into contact with foods that may trigger symptoms.

Timeline. *Create a timeline that includes specific dates and times (table, figure, or graphic).*

We met on 3 occasions: July, mid-September and mid-November 2013. The programme began days after we met in July. There were reduced supplements each time we met, due to the improvements that S.L. experienced by following the supplements and the elimination of fruit. I have also had contact with the mother and S.L. since November in 2013 and the benefits remained present over a year later (no further follow ups have been undertaken, asked to return if symptoms re-emerge).

Diagnostic Focus and Assessment. *Provide an assessment of the (1) diagnostic methods (eg, PE, laboratory testing, imaging, questionnaires, referral); (2) diagnostic challenges (eg, financial, patient availability, cultural); (3) diagnostic reasoning including other diagnoses considered, and (4) prognostic characteristics (eg, staging) where applicable*.

The Dr's assessment combined with skin prick testing had resulted in the diagnosis and prescription of an anti-histamine liquid medication. I did not recommend any tests, mainly because it was known what triggered the symptoms that S.L. experienced and there was a clear diagnosis. Having said that, each individual with OAS may vary to some degree in terms of what they react to.

S.L. took all of her supplements and these were stored in another room other than the kitchen, and joined her family for meals at the end of the table, closest to the door and furthest way from any food preparation and the fruit bowl which was at the other end of the room.

Therapeutic Focus and Assessment. *Describe: (1) the type(s) of intervention (eg, preventive, pharmacologic, surgical, lifestyle, self-care) and (2) the administration and intensity of the intervention (eg, dosage, strength, duration, frequency).*

S.L. and her family were strict with their adherence to the avoidance of fruit and food exposure so as to minimise all possible triggers. S.L.'s sister was encouraged to be with her before meals so that she was not separated from the family in the process of meal preparations, when previously both girls had helped their mum.

S.L.'s mum had a further word with the school and emphasised the importance of this period of time in which she told the Head Teacher that they were doing what they could to resolve the allergic symptoms.

First Supplement Programme – July 2013	
Free Aminos (ARG)	2 with / just before breakfast & 2 with dinner
Gammanol Forte (BRC)	2 with / just before dinner
Bio-D-Mulsion (BRC)	2 drops with / just before dinner
S. Boulardii (ARG)	1 with / just before breakfast & dinner
Lactobacillus P, R, S (ARG)	½ caps with / just before breakfast & dinner
Quercetin Bioflavonoids (ARG)	1 caps before breakfast & dinner

In mid-September, when we met for the second time, S.L.'s mum reported that the symptoms had definitely improved and the stress of the condition had lessened, and she (the mum) was much less distressed than she had been.

There had been one occasion, two weeks into the program when S.L. had been exposed to some fruit or veg and did swell around her mouth and the skin around her mouth went red. Other than that S.L. had mostly been entirely symptom free. She had not needed the anti-histamine medication.

The degree of reactivity was so much less than before and S.L.'s mum was convinced it was a combination of the avoidance of triggers as well as the supplements. S.L. had more energy than usual, and she had grown taller – which was something her mum and dad looked out for with a keen eye because she was quite petite.

S.L. had definitely handled an apple, in her hands, but had not eaten it, but also had no reaction and this was a first for many months. Overall, it seemed that S.L.'s immune reactivity was no longer presenting as it had done for months beforehand.

We discussed allowing S.L. to 'try' the school fruit and re-join her classmates, and decided that this would be ok, which meant not to eat the fruit but to be present when it was handed out at break-time.

I received a call the following week to confirm that S.L. was free of any reaction and was very happy to be with her friends and class again, even though she was not eating the fruit. I was also told that S.L. was back in the kitchen when at home – but she was careful not to put her hands to her mouth. S.L. was content with this exposure.

As a result of the improvements, supplements were reduced overall but the same strict dietary avoidances remained in place. S.L.'s mum was made aware of the specific supplements which may be helpful for the histamine / allergic response (i.e. Quercetin Bioflavonoids and S. Boulardii).

Second Supplement Programme – September 2013	
Free Aminos (ARG)	2 with / just before dinner
Gammanol Forte (BRC)	2 with / just before dinner
Bio-D-Mulsion (BRC)	2 drops with / just before dinner
S. Boulardii (ARG)	1 with / just before dinner
Quercetin Bioflavonoids (ARG)	1 caps before breakfast

In mid-November we met for the third time. The compliance had been very good and a routine had been established. S.L.'s symptoms had disappeared and she no longer had any oral symptoms (red skin around her mouth & red or swollen tongue) or runny eyes.

By all observations the OAS symptoms had disappeared completely. S.L. had even eaten an apple and a pear (on separate days) and now had no reaction at all. S.L.'s mum was still careful, and this meant that S.L. did not eat too much fruit, less than twice a week. In fact, the approach was for S.L. to consume fruit at school only so that she was fully included in the break-time there and NOT at home since this would not impact S.L. in a social manner in the same way as at school.

She ate cooked veg at home and was just fine.

S.L. had a sore throat when we met in November, which was reflective of current infection rates at school, and so Humic Acid (ARG) was added to the program as a natural way to enhance the bodies anti-viral mechanisms.

Third Supplement Programme – November 2013	
Gammanol Forte (BRC)	2 with / just before dinner
Bio-D-Mulsion (BRC)	2 drops with / just before dinner
Humic Acid (ARG)	1 with / just before breakfast & dinner

S.L.'s mum had instructions to add the Quercetin Bioflavonoids (ARG) & the S. Boulardii (ARG) if there was a return or manifestation of any symptoms.

S.L's mum was delighted about the resolution of her daughter's OAS and acknowledged that this improvement had changed S.L.'s life and hers and that of her family. She was thrilled.

Supplement Information

- Free Aminos (ARG) provides dairy free, free form amino acids. This helps to ensure that SL was ingesting high BV amino acids in addition to her sound diet, which technically contained adequate protein.
- Gammanol Forte™ (BRC) supplies gamma oryzanol with FRAC, providing free ferulic acid with a complex mixture of polyphenolics, including free sterols and triterpenoids. FRAC possesses significant free-radical scavenging properties. Supplementation may support growth hormone production and IGF-1 levels which in turn may support healing.
- Bio-D-Mulsion (BRC) provides 400 iu per drop of emulsified vitamin D3, a product that has been clinically and research proven to efficiently raise serum vitamin D levels. It is essential to ensure adequate and optimal vitamin D levels at times of healing as it offers key immune support.

- S. Boulardii (ARG) - the well-known probiotic yeast that supports SIgA levels, and can also reduce mucosal inflammation as well as help temper allergic reactivity.
- Lactobacillus Plantarum, Rhamnosus, Salivarius (ARG) provides particularly hardy strains of lactobacilli that help to maintain a healthy intestinal probiotic balance. They support the structure and functional integrity of the epithelial lining in numerous ways & may enhance immune response and support resistance. They can also produce vitamins, enzymes, and organic acids that support normal intestinal pH and bacterial diversity.
- Quercetin Bioflavonoids (ARG) – quercetin is an antioxidant bioflavonoid found throughout the plant kingdom in rinds and barks. Can help stabilise cell membranes, and support the integrity of mast cells (and their subsequent release of histamine), useful in tempering allergic responses.
- Humic Acid (ARG) - 2 capsules contain 750 mg of humic acid. Humic acids are the organic components of soil, peats, brown coals, shales, and lake sediments, formed from decomposed plant material. Humic acid can bind to cell surfaces with no adverse effects on the cell itself or on cell growth, and can support normal, healthy resistance and immune response. In clinical terms, humic acid can bind to viruses and inhibit their replication, which results in enhancing the bodies anti-viral activity.

Discussion. *Please describe (1) the strengths and limitations of this case report including case management, (2) the literature relevant to this case report (the scientific and clinical context), (3) the rationale for your conclusions (eg, potential causal links and generalizability), and (4) the main findings of this case report: What are the take-away messages?*

Strengths and limitations of this case report including case management

The ability of S.L. to follow the program relied heavily on her mother, but she was also motivated to follow the recommendations as she wanted to be well and re-join her friends and family in 'normality'. Rather than complain, she was a positive force in the whole process and always smiled.

OAS appears to be presenting more than in the past and I had prior experience with the condition in others prior to meeting S.L.

The family were used to taking supplements which made that part straightforward. The first program was extensive, yet effective, and it was the efficacy which supported compliance to the dietary eliminations as well as adherence to the supplement program. As improvements were experienced, so supplements were reduced which gives positive feedback for the whole process.

The literature relevant to this case report

There are numerous research papers on the subject of OAS, PFS and latex fruit-syndrome to give a clear indication of the mechanisms involved.
Allergy UK state this: http://www.allergyuk.org/oral-allergy-syndrome/oral-allergy-syndrome

The rationale for your conclusions

The diagnosis had been made by the family GP and there was no reason to question this from the presentation of the signs and symptoms and case history information of S.L. The nutritional supplements chosen were straightforward because of the well appreciated therapeutic target which was to support mucosal immune tolerance.

The main findings of this case report: What are the take-away messages?
OAS is increasing in prevalence in my own clinical experience, and has been confirmed in some research studies.

The ability to successfully address and resolve OAS has been shown in this case, without medications.

Although there was no control girl of 7 years of age to compare to, it would appear that the appropriate and relatively extensive supplemental support along with a strict avoidance of triggers may best serve an individual who has OAS for prompt resolution.

Patient Perspective. The patient should share his or her experience or perspective of the care in a narrative that accompanies the case report whenever appropriate.

S.L. was very happy that she no longer had the symptoms because it meant she could eat fruit as before and importantly be with her friends and family, and not be 'different'.

S.L.'s mum and dad were thrilled to have their daughter overcome the allergy symptoms for these reasons and because they were aware of longer term issues that may arise from ongoing allergies both on a physical and psychological level.

The resolution was very confirming and supportive of the strongly held health view of S.L.'s mum who firmly believes that sound nutrition is fundamental to well-being, and would only use medications as a last resort.

Informed Consent. *Did the patient give the author of this case report informed consent? Provide if requested.*

S.L. and her mother are not aware of S.L.'s case history being used, and all identifiable data has been removed. S.L. are not the girl's real initials.

Case Report Submission Requirements for Authors

1. Competing interests. *Are there any competing interests?*

None Known

2. Ethics Approval. *Did an ethics committee or Institutional Review Board give approval? If yes, please provide if requested.*

This case was not presented to an ethics committee.

3. De-Identification. *Has all patient related data been de-identified?*

All patient data has been re-identified

4. Author. *Name of Author and practice*

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