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## Successful Integrative Medicine Assessment and Treatment of Chronic Allergic Rhinitis, Asthma and Eczema Related to a Metal Dental Crown: Case Report

### Abstract

An 8 year old female with chronic allergic rhinitis, asthma, and eczema was assessed with autonomic response testing which pointed to nickel sensitivity in a metal dental crown. Removal and replacement of the crown along with an integrative medicine treatment approach resulted in dramatic improvement. The report beckons the research community to examine nickel exposure, and the usefulness of autonomic response testing as a clinical assessment tool<sup>1</sup>.

### Introduction

We present a case report which demonstrates a whole system integrative medicine approach to assessment followed by integrative medicine treatment approaches resulting in rapid resolution of four chronic conditions which had failed standard medical assessment and treatments: allergic rhinitis, asthma, eczema, and frequent feelings of hunger.

The whole system evaluation identified a dental crown composed partly of nickel as a factor in the patient's situation. Removal of the crown was followed by rapid resolution of the patient's chronic skin and respiratory problems. The whole system assessment approach was Autonomic Response Testing (ART). Based on a literature review of PubMed (includes MEDLINE), EMBASE, AMED, and CINAHL, this is the first report of such a case involving ART.

Nickel and other metal allergies are problematic internationally<sup>1,2</sup>. In the United States, there has been an exponential increase in the number of nickel allergy cases appearing in the peer reviewed literature<sup>3</sup>. It is estimated that 15-20% of the Western population is allergic to at least one metal<sup>1</sup>.

The most common form of allergic reaction to nickel is allergic contact dermatitis (ACD)<sup>4,5</sup>. However, nickel allergy can manifest without direct contact to the skin. Included in these non-skin contact manifestations are asthma, allergic rhinitis, and hand dermatitis. These non-skin contact

manifestations have been referred to as systemic contact dermatitis (SCD)<sup>4,7</sup>. Sources of nickel exposure include dental materials and dietary intake besides, other sources such as jewelry<sup>2,5,7-15</sup>. In a case series of 20 patients with allergic rhinitis 11 of whom also had asthma, Brera reported improvement in nasal and bronchial symptoms with a low nickel diet<sup>6</sup>. Pigatto reported removal of nickel dental sources resulted in resolution of SCD within 12 months<sup>15</sup>. Atsushi reported a case of successful resolution of eczema of the palm of the hand after removing dental crowns and replacing them with crowns composed of material non-allergenic to the patient<sup>16</sup>.

ART is one of the versions of applied kinesiology. Applied kinesiology was originated by George Goodheart, Jr., DC<sup>17</sup>. Other versions of applied kinesiology have been developed with the conviction that the newer versions are more accurate. A number of integrative medicine practitioners use some version of applied kinesiology to identify disease factors and possible therapeutic agents.

The herein discussed version named ART was developed by Dietrich Klinghardt MD, PhD and Louisa Williams DC, ND<sup>18</sup>. It is to be noted that different versions of applied kinesiology may give conflicting results<sup>19</sup>. Thus far, there is only one peer reviewed evaluation of ART. We published a pilot study in which ART well in the identification of allergies with the IgE blood test<sup>20</sup>. We hope the herein report motivates further vigorous studies of ART. The patient's mother has provided signed informed consent.

**Case presentation****Visit 1:****History of present illness**

An 8 year old white female presented with a history of upper respiratory allergies, asthma, eczema on the dorsum of the hands, multiple ear infections and moderate obesity over the past 4 to 5 years. She averaged a couple of urgent care or emergency room visits per year.

Pressure equalization tubes were placed in her ears on four separate occasions with subsequent damage to her tympanic membranes leading to some hearing loss. Her past medications included oral steroids, montelukast (Singulair®), and dermatologist prescribed steroid creams.

The patient's mother discontinued montelukast and reported that the patient began gaining weight near the start of montelukast therapy. The patient's unsatisfactory response to standard medical therapy prompted the visit to our integrative medicine practice.

**Past medical history:** As above.

**PSH:** As above

**Dental History**

Metal crown placed on the lower right first molar deciduous tooth approximately 8 weeks prior to the appearance of all her allergy symptoms and the eczema on the dorsum of both hands.

**Medications**

Albuterol, inhaled steroids, cortisone cream and Ayurvedic herbal mixtures for allergies.

**Physical exam**

Patient was a moderately obese female with notable eczematous scaly rash on the dorsum of both hands. Patient was not wheezing at the time of the visit. A metal dental crown was present on her lower right 1<sup>st</sup> molar deciduous tooth. ART was positive for nickel, the patient's dental crown, and the intestinal parasite *Trichuris trichiura* (whip worm).

**Assessment**

The history and physical exam indicated allergic rhinitis; asthma; bilateral eczema of the dorsum of both hands; moderate obesity; probable sensitivity to nickel and to the metal dental crown; and probable sub-clinical whip worm intestinal infection.

**Treatments**

Cold laser ear and body acupuncture was performed. The Nogier<sup>21,22</sup> ear acupuncture system was used while selection of the body points was based on MKC's clinical experience.

Albendazole 200mg twice a day for 5 days was prescribed and repeated for two weeks later. The patient's mother was advised to have the dental crown removed. See Table 1.

**Visit 2- Three weeks later** (0.75 months after the first visit)

The dental crown had been replaced by a porcelain crown. Patient's mother reported the manufacturer of the crown stated that the amount of nickel was very small. No episode of wheezing was reported and the patient's eczema had resolved. The patient's constant hunger was reduced by 50%. On physical exam there was no wheezing and ART was negative for nickel and parasites as well.

**Treatment**

Ear and body laser acupuncture was done as on the previous visit. In addition the Nogier phase 1 Hypothalamus point of the right ear was cold laser stimulated. See Table 1.

**Visit 3-Two months later** (2.75 months after the first visit)

Patient reported no wheezing and there was no need to use an inhaler. She stopped the use of her Ayurvedic herbal remedies. She also reported her eczema was gone. Her excess hunger was further reduced by 20-30%.

The physical exam was normal. ART was positive for parasites but negative for nickel. Clinical impression was that the excess hunger was secondary to subclinical parasitic infection.

**Treatment**

Laser ear and laser body acupuncture was performed. Tinidazole was prescribed for two days, 2000 mg taken once a day and then repeated for 2 weeks. See Table 1.

**Visit 4-One month later** (3.75 months after the first visit)

Patient reported no wheezing and she had a cold without the precipitation of an asthma attack and a course of steroids was not necessitated either. The excess hunger was still present but improved. The physical exam was normal as was the ART. It was assessed that the eczema, upper respiratory allergies, and asthma symptoms were resolved while the excess hunger condition was improved. The patient was treated with Nogier ear laser acupuncture. See Table 1.

**Visit 5-Twenty months later** (23.75 months after the first visit)

The patient reported no asthma and was off all asthma medications. The hand rash returned intermittently in mild form. The patient reported losing her excess body weight without effort. Physical exam was normal and showed the patient was no longer obese and had an athletic appearance. ART was positive for dairy and nickel and predicted desirable responses to borage oil, vitamin D, and vitamin K2. The assessment was that the mild intermittent recurrence of eczema was due to dairy intolerance and probable excess nickel in the diet. Needle ear acupuncture was done and a low nickel diet prescribed. See Table 1.

**Visit 6-Seven months later** (30.75 months after the first visit)

Patient complained of mild chest congestion. She also reported diarrhea and bloating for several weeks. Her excess hunger was partially returning. Her physical exam was normal. ART was positive for dust, grain, seeds, tree pollens, and multiple parasites. Treatment consisted of body acupuncture and prescriptions for: Albendazole 200 mg b.i.d. for five days and repeated in two weeks and Biltricide 600 mg q 4 hrs for 3 doses and repeated in two weeks. See Table 1.

**Visit 7-Two months later** (32.75 months after the first visit)

Patient reported resolution of bloating and diarrhea after taking anti-parasitic medication. She reported no asthma and no eczema. She did report mild nasal allergies. ART was positive for inhalant allergens. ART was negative for parasites. Sublingual very low dose immunotherapy<sup>23</sup> for inhalant allergens was given in the office. Body acupuncture was performed. See Table 1.

**Telephone interview with mother** 7months since the last visit (39.75 months after the first visit)

Mother reported the patient has been doing fine. The patient is free of allergic rhinitis, asthma and eczema symptoms. Her weight has remained normal. See Table 1.

**Discussion**

An eight year old female with chronic upper and lower respiratory problems, eczema, and obesity failed standard medical assessment and treatment. She had resolution of her conditions after an integrative medicine assessment and treatment approach was applied. Identification of nickel sensitivity followed by removal of a metal dental crown appear to be key elements of the successful management of this case.

ART allowed the identification of the nickel sensitivity. ART assesses the person as a whole. Patients are assessed for

toxins, infections, allergies, dental issues, psychological issues, dietary problems, etc.<sup>24</sup>.

In our integrative medicine practice composed of patients who have failed standard medical care ART has been extremely useful<sup>25-30</sup>.

This report is a retrospective case report and thus occupies a place at the bottom of the evidence hierarchy. The patient received multiple forms of treatment in addition to removal of the metal dental crown. Thus multiple confounders are present. It is not possible to state with certainty which treatment component had the biggest effect. Future rigorous research is required to determine the dominant factor, factors or combination of factors. The purpose of this report is to stimulate further evaluation of ART and further epidemiological assessment of nickel exposure related to chronic unremitting medical conditions. We welcome collaboration with others.

Based on our clinical experience<sup>25-30</sup> and our literature review<sup>1-16</sup> we feel that removal of the dental crown was paramount in the resolution of the patient's allergic rhinitis, asthma, and eczema. Though the patient also received ear acupuncture, our past experience with ear acupuncture has not resulted in such rapid resolution of asthma.

**Conclusion**

Nickel sensitivity's relationship to chronic diseases and ART's utility in whole person assessment deserve attention from the research community.

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Visit Number	Outcomes since previous visit	ART findings	Treatments	Prescribed treatments
1. Initial visit	Not applicable	Positive for nickel; crown on patients lower right first molar deciduous tooth; and parasite <i>Trichuris trichiura</i> (whip worm)	Cold laser ear acupuncture. Cold laser body acupuncture	Removal of dental crown and anti-parasitic medication
2. - 0.75 months after the first visit	No wheezing. No eczema. 50% reduction in constant feelings of hunger	Negative for nickel and for parasites	Cold laser ear acupuncture	None
3. - 2.75 months after the first visit	No wheezing. No Eczema. 20%-30% reduction in excess hunger	Negative for nickel. Positive for parasites. Predicted a good response to Tinidazole	Laser ear acupuncture. Laser body acupuncture	Anti-parasitic medication
4. - 3.75 months after the first visit	Upper respiratory problem resolved. Asthma resolved. Eczema resolved. Excess hunger further reduced by 20% .	Negative testing	Laser ear acupuncture	None
5. - 23.75 months after the first visit	No asthma. Mild intermittent eczema. No excess hunger	Positive for dairy and nickel. Predicted a good response to borage oil, Vitamin D and Vitamin K2	Ear acupuncture	Avoid foods high in nickel content
6. - 30.75 months after the first visit	Excess hunger partially returning. Mild chest congestion. Bloating diarrhea	Positive for dust, grain, seeds, tree pollen and multiple parasites	Body acupuncture	Anti-parasitic medications
7. - 32.75 months after the first visit	Mild nasal allergies. No asthma. No eczema. Resolution of bloating and diarrhea	Tests positive for inhalant allergens. Parasite test negative	Body acupuncture	Very low dose sublingual immunotherapy
Telephone Interview with mother: 39.7 5 months after the first visit.	No allergic rhinitis. No asthma. No eczema. Normal body weight	Not applicable	Not applicable	Not applicable

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