PICA HABIT AMYLOPHAGIA - A CASE REPORT

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ABSTRACT

Pica is the persistent craving and compulsive eating of non-food substances. The stigmatism associated with eating non-food products often leaves people feeling embarrassed to admit to their unusual eating habits, hindering appropriate medical diagnosis and management. This paper reports the unusual presentation of a 31 year old Afro-Caribbean woman with a habit of eating starch corn flour.

Key words: Amylophagia; Dental; Pica

Introduction

Pica is the persistent craving and compulsive eating of non-food substances.1 The phenomenon of Pica has been reported in medical journals for centuries and was first described to affect a pregnant woman in the 6th Century AD.2 The term originates from the Latin word for magpie, as this omnivore bird is known to eat anything. Pica affects both men and women of all ages and ethnicities. A higher incidence is associated with developmental delays, psychiatric disorders, autism, pregnancy, low socio-economic status, poor nutrition/ nutritional deficiencies and certain religious/spiritual traditions. Worldwide, 20% of pica cases involve pregnant women, 25-33% small children and 10-15% of cases involve those with learning disabilities.3 The three main types of Pica include the consumption of earth, soil or clay (Geophagia); the consumption of ice (Pagophagia) and the consumption of starch (Amylophagia). The high calorie content of starch consumption can cause excessive weight gain, however surprisingly; these patients are malnourished due to the lack of vitamins and minerals within the starch. Other types of pica habits include ingesting hair, paint and paper.

Patients with pica are often iron deficient, however it is unclear whether the iron deficiency causes the pica habit or if it occurs as a result of it.4 The ingestion of substances such as clay is known to block the absorption of iron into the bloodstream, hence it is suggested that this could result in iron deficient anaemia. However several studies have shown that pica habits cease once patients are given iron supplements to correct the iron deficiency. Patients with pica are at risk of medical complications such as metabolic disorders, lead/mercury poisoning, parasitic infections, tooth wear and intestinal obstructions.5,6 Although the exact pathogenesis is unclear, there is a significant association with iron deficient anaemia.2,4,7 This paper reports the unusual presentation of a 31 year old Afro-Caribbean woman with a habit of eating starch corn flour.

Case Report

A 31 year old Afro-Caribbean woman was referred by her general dental practitioner to the Dental Hospital for the surgical removal of her impacted lower wisdom teeth. On presentation, the patient was slender in build, revealed no systemic illness or allergies and her only medication included the oral contraceptive pill. Clinically, her oral hygiene was good with no evidence of tooth wear or parafunctional behaviour. Both lower third molars were impacted with food trapping, bleeding on probing and 4-5mm pockets. The upper third molars were over-erupted. The incidental finding of a concentric, mixed radiolucent and radiopaque lesion was observed on the Dental Panoramic Tomography (DPT) radiograph (Figure 1). A subsequent Cone beam Computer Tomography (CBCT) scan gave a provisional diagnosis of fibro cemento osseus dysplasia. A clinical decision was made to extract all four wisdom teeth and carry out a biopsy of the left mandibular lesion under general anaesthesia.

Prior to hospital admission for a general anaesthetic procedure, routine blood tests were carried out on the patient to screen for possible sickle cell anaemia or any other conditions and several abnormalities were detected (Table 1). Iron deficiency was the most likely cause for the abnormal blood test results, but a detailed history of possible bleeding sources revealed no causes. The patient was questioned about menorrhagia (heavy periods), history of peptic ulcers, coeliac’s disease, pregnancy, medications associated with GI bleeding such as non-steroidal anti-inflammatory drugs or anticoagulants (aspirin, clopidogrel, warfarin), but there was no positive correlation. Other possible causes such as malignancy were also considered, investigated and ruled out. After extensive investigations all revealed negative results, the patient finally disclosed about her pica habit. She explained that she consumed 300grams of corn flour daily, a habit she had acquired as a teenager. Under the advice of the Haematology specialists, the patient was prescribed a six-week course of ferrous sulphate before proceeding with dental treatment.

<table>
<thead>
<tr>
<th>Lab test</th>
<th>Value</th>
<th>Normal range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin</td>
<td>7.0</td>
<td>11.5-16.5 g/dl (women)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13-18 g/dl (men)</td>
</tr>
<tr>
<td>Mean Corpuscular volume (MCV)</td>
<td>69.7fL</td>
<td>77-95 fL</td>
</tr>
<tr>
<td>Mean Corpuscular Haemoglobin Concentration (MCHC)</td>
<td>21.0</td>
<td>32-36 g/dl</td>
</tr>
<tr>
<td>Ferritin</td>
<td>3mcg/L</td>
<td>18-160 mcg/L (women)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18-270 mcg/L (men)</td>
</tr>
</tbody>
</table>

Table 1: Routine pre-operative blood test results:
Discussion

Despite the fact that pica has been observed for centuries the condition still remains elusive and fascinating in aetiology and presentation. There is a strong association with iron deficient anaemia, with several cases reporting that the pica disorder resolves once the anaemia is addressed and treated.2,7-9 In this case, the patient was malnourished due to the high intake of starch corn flour, causing her iron deficient anaemia. Patients with a pica habit are secretive about the condition and tend to avoid mentioning it to medical professionals. Thus, pica related symptoms go untreated for long periods without treatment. Early diagnosis of the condition can help to prevent/minimise bleeding problems or other medical complications, particularly during pregnancy. Certain population groups have a higher prevalence of the pica habit; including those with nutritional deficiencies, developmental delays and during pregnancy. Stress associated with traumatic events is also linked to pica. For example, child abuse, maternal deprivation and parental separation have been shown to be triggers for pica habits.

Management of pica varies based on the aetiology. Children tend to outgrow their habit whereas those with psychological components need referral to counsellors and therapists. Co-ordinated team care between medical, dental and social care professionals working together with patients and families is imperative.10 This case was managed with patient education, a course of iron supplements to treat the iron deficiency and referral for psychological counselling. The patient’s fears of being alone in her condition were allayed by making her aware of the prevalence of the condition amongst many other people. All dentists are taught about the phenomenon of pica during their undergraduate training however we rarely attribute oral conditions such as tooth surface loss, recurrent fractured restorations or abnormal findings on blood tests to the possibility of this condition.

Conclusion

In conclusion, the importance of taking thorough and accurate histories cannot be underestimated in order to provide high quality dental care in a safe manner.

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References


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