

CASE REPORT



An hitherto case of so-called extinct disease: Scurvy with review of the literature

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Abstract

Scurvy which is known to be an extinct entity but still specks of this disease still persists in various parts of the world which goes with the famous saying that says "history often repeats." Scurvy is sometimes referred to as Barlow's disease, named after Sir Thomas Barlow, a British physician who described it. Scurvy is basically a disease that is known to occur because of inadequate supply of vitamin C to the body. To diagnose this disease without undergoing expensive investigations, history taking has been proven to be a powerful tool.

We present a case of 2-year-old patient visiting our department with bleeding gums, joint pain, and weakness. Clinical data along with a significant improvement after administering vitamin C supplement confirms the diagnosis. Hence, question remains still unanswered that whether and had to be carried to the OPD. His mother revealed history of severe pain and scurvy still persists or no.

Keywords: Ascorbic acid, gingival bleeding, scurvy

Case Report

A 2-year-old boy [Figure 1] reported to our department with a chief complaint of severe pain, bleeding, and swelling in gums since 5-6 days. Patient was extremely irritable, apprehensive,



Figure 1: A 2-year-old boy visited OPD who was highly uncooperative and irritable

uncooperative bleeding gums and pain in the leg since 10 days and because of which he was not able to walk. He was devoid of any fruits and vegetables and was on a milk diet since 1 month. Patient was not on any medications. Patient was not able to brush his teeth due to painful gums.

He was poorly built, malnourished and febrile. On extra oral examination, rough and scaly skin and nail bed and lower palpebral conjunctiva were pale. Intraoral examination revealed bluish pink colored gingiva, positioned 2 mm coronal to cemento-enamel junction, soft and edematous and spontaneous bleeding was observed. Pinpoint red hemorrhagic spots were seen on the tongue measuring: 1 mm × 1 mm [Figure 2]. Patient had deciduous dentition with partially erupted-72, 73, 84, and unerupted-82.

Plaque, stains, and calculus were minimal, hence were noncontributory to such gingival presentation. Hence, by noting the proper history and thus according to clinical data available provisional diagnosis scorbutic gingivitis was made. After taking written consent from patient's mother further investigations, were carried out.

Leukemic gingival enlargement was considered in the differential diagnosis but was ruled out because of no other hemorrhagic spots seen and further on blood investigations.

Hematological report revealed low HB level 6 g/dl. Therefore, final diagnosis was scurvy-scorbutic gingivitis, Iron deficiency anemia. Patient was administered vitamin C tablets and iron supplements, diet counseling was done and the patient was recalled after 7 days for evaluation. After 1 week, significant improvement was seen in the patient's gingival symptoms and overall health of the patient [Figure 3].

Review of Literature

Although scurvy has taken its position in the classification of rare diseases but still it is seen to occur in developing countries.^[1] Scurvy takes its origin from German word *schorbuk* which means *schoren-break* and *buk-belly* which was observed among sea workers in 16th century who reported of old healed scars that resembled the ruptured belly.^[2] Scurvy is defined as a state of nutritional disease associated with the lack of ascorbic acid levels which leads to suppression



Figure 2: Intra oral pre-treatment picture



Figure 3: Intra oral post-treatment

of collagen synthesis and thus leading to the formation of defective collagen. Ascorbic acid is responsible for various biological functions such as bone formation, iron metabolism, tryptophan and tyrosine metabolism, folic acid metabolism, synthesis of corticosteroid hormone, sparing action of other vitamins, immunological functions, and anti-oxidant activity. Recommended dietary allowance in adults is 60 mg/ day, infants - 30 mg/day pregnancy or lactation - 80-100 mg/day, toxicity - 2000 mg/day.^[3] Because humans do not have the capability to synthesize ascorbic acid in their body, we should incorporate citrus fruits like oranges, lemons grapefruits, potatoes, broccoli, spinach in our diet.^[3] Ascorbic acid can be easily destroyed by heat; therefore, many foods can lose their ascorbic acid content because of cooking, storage, or oxidation. There are particular set of risk groups that are seen to be most commonly associated with scurvy like people allergic to raw fruits and vegetables, certain specific food pattern like consumption of rice or milk diet, poverty, depression and anorexic patients, special need like puberty, pregnancy, lactation, renal diseases, and malabsorption syndrome.^[4] In the present case, poverty and continuous consumption of milk diet was the probable cause. Symptoms may begin with appetite loss, weight loss, diarrhea, rapid breathing, fever, irritability, tenderness and discomfort in legs, swelling over long bones, bleeding, and feelings of paralysis.

As the disease progresses, a scurvy victim may present bleeding of the gums, loosened teeth, petechial hemorrhage of the skin and mucous membranes, bleeding in the eye, proptosis of the eyeball, costochondral bleeding, hyperkeratosis, corkscrew hair, and Sicca syndrome.^[5] In our case appetite loss, fever, irritability, and pinpoint hemorrhages, and pain in extremities were noted.

According to all the diagnostic investigations available to diagnose scurvy, clinical data available and significant improvement after ascorbic acid supplementation confirm diagnosis. Therefore, this clearly shows that the clinical history should be taken in detail as we did for this patient which helped us in diagnosis. Other methods of diagnosis scurvy are radiological investigation which shows skeletal changes like thinning of cortical bone, biochemical investigations like blood ascorbic acid level, ascorbic acid tolerance test, serum ascorbic acid level test. These tests require a lot of extensive procedures and are not even standardized.^[6] Therefore, they are not routinely carried out, and it is diagnosed on the basis of clinical data. The prognosis of scurvy is excellent, and the response to vitamin C is excellent. Therefore to conclude, it is not only important to obtain case history for diagnosis but also for the prevention. Therefore, it is important for the dental professionals to counsel the patients about the diet and other nutritional requirements to the body. Nutritional deficiencies pose a great difficulty in terms of diagnosis because of certain common sharing and nonspecific symptoms. It is important to continue acknowledging the role of nutrition in health in order to promote healthy lifestyles and help prevent serious life-threatening illnesses.

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