

CASE REPORT



Hyperpigmentation of palms - A clue to B12 deficiency

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Abstract

B12 deficiency anemia is commonly seen in elderly people who are pure vegetarians, especially in those who even avoids milk consumption. Hyperpigmentation of the palms is one of the common clinical manifestations of B12 deficiency, and here, we report such a case of B12 deficiency who presented with hyperpigmented palms.

Introduction

Anemia is common in elderly people due to various reasons such as poor nutrition, use of non-steroidal anti-inflammatory drugs for cardiac ailments, and the increasing incidence of intestinal malignancies. Evaluating anemia is, hence, challenging and requires a careful history taking and a careful physical examination apart from routine laboratory investigations. In certain cases like B12 deficiency presence of hyperpigmentation of palms and soles, if present can provide an important clue to the etiology of anemia. We present this case to emphasize the importance of history taking and careful examination of patients presenting with anemia.

Case Discussion

A 47-year-old male presented with h/o lassitude, weakness, and exertional dyspnea of 3 months duration. He stopped eating non-vegetarian diet for the past 3 years including milk due to religious reasons. On examination, there were pallor, glossitis, and angular stomatitis. He also had hyperpigmentation of the palmar aspect of the both hands [Figure 1a]. Investigations showed hemoglobin of

6.9 g/dL with MCV of 120 fls and peripheral smear showed hypersegmented neutrophils with megaloblastic changes of the red blood cell. Gastroscopy was normal except for pale gastrointestinal mucosa. B12 deficiency was suspected in view of his dietary habit and megaloblastic anemia. The diagnosis was confirmed when his B12 level was tested to be low with a value of <83 pg/dL (normal range being 180–900 pg/dL) which was most likely secondary to nutritional deficiency. Folic acid and iron levels were normal. Following B12 correction, his hyperpigmentation resolved [Figure 1b] and his hemoglobin level after 2 months was 10.5 g/dL and the patient was symptomatically better.

Discussion

Hyperpigmentation of palms is one of the common manifestations of B12 deficiency and in a patient with megaloblastic anemia provides an important clue to the diagnosis of B12 deficiency.^[1,2] The mechanism of hyperpigmentation in B12 is complex and poorly understood. The two more accepted hypotheses are increased melanin synthesis and defective melanin transfer from melanocytes to adjacent megaloblastic keratinocytes.^[3] The

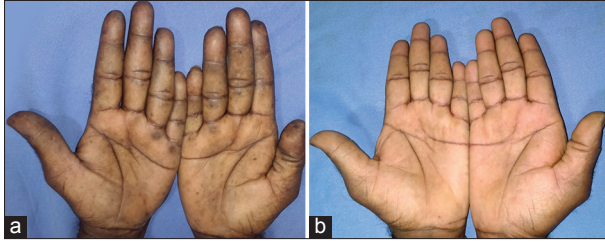


Figure 1: Hyperpigmentation of the palms in patient with B12 deficiency before treatment (a) and complete resolution of the hyperpigmentation after B12 correction (b)

hyperpigmentation is often reversible with correction of B12 deficiency as seen in our patient.

References

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