An Unusual Skin Manifestation in a Patient with Peutz-Jeghers Syndrome

Peutz-Jeghers Syndrome (PJS; MIM 175200) is a rare autosomal dominant syndrome with variable inheritance, characterized by hamartomatous polyps in the gastrointestinal tract, mostly in the small bowel, and pigmented muco-cutaneous lesions (1).

Hereditary disorders constitute 70% of PJS cases. The other 30% of cases occur without any previous family history, as a result of spontaneous genetic mutations.

The prevalence is estimated at 1/25,000 to 1/230,000 live births, with no racial or sexual predilection (2).

The majority of patients that meet the clinical diagnostic criteria have a causative mutation in the serine/threonine kinase 11 (STK11) gene, which is located at 19p13.3.

Melanic spots are the earliest manifestation of PJS, typically appearing in the first year of life, and represent the muco-cutaneous marker of this syndrome. They are most commonly seen on the lips and buccal mucosa, anal and intestinal mucosa, nasal and periorbital regions, hands and feet. Rarely, nail pigmentation is observed (3).

Melanonychia is a brown or black pigmentation of the nail plate caused by the presence of melanin, and is extremely rare in PJS.

We report on a case of a 60-year-old woman diagnosed with Peutz Jeghers syndrome who presented an unusual acral pigmentation with longitudinal melanonychia.

A 60 year old woman was referred in our department in September 2012 for evaluation of hyperpigmented macules of the fingers, lips, buccal mucosa, and nails, present from the age of 15.

Brown macules of 1-3 mm were found on the lower and upper lips and gingival mucosa (Figure 1). There was no ulceration inside the mouth.

The patient presented brown, round, and oval macules 1-5 mm in diameter on the fingers.The nails of the first and second finger of the right hand showed 4-5 mm thick longitudinal brownish bands (Figure 2).

There was no history of any drug intake (including antimalarials, minocycline, or gold therapy), exposure to radiation, PUVA, or any trauma prior to the onset of the pigmentation. The Hutchinson sign was also negative. Physical examination showed abdominal bloating. The patient reported a minor pain throughout the abdomen on palpation. Rectal examination showed no pathological mass, and there were traces of feces on the glove.

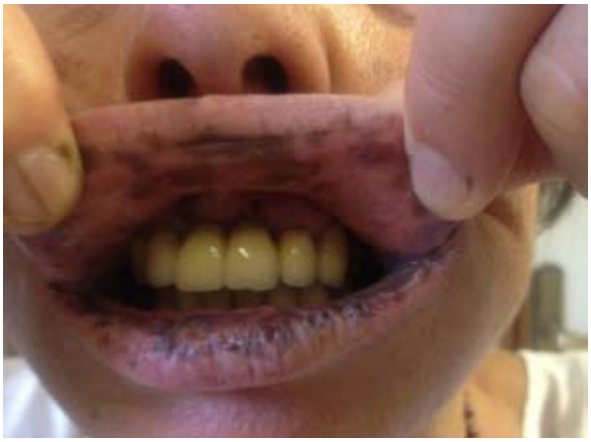

Figure 1. Melanic spots on the lips and the gingival mucosa.

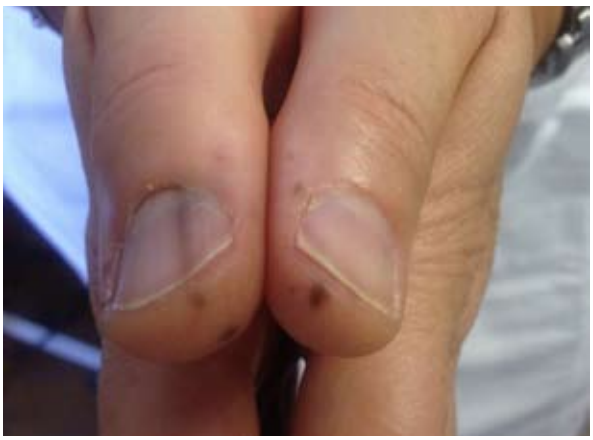

Figure 2. Longitudinal melanonychia.

Laboratory tests were also within normal ranges except for a mild anemia, with microcytosis and iron depletion, but the stool was positive for occult blood. We then decided on further endoscopic investigation. Upper digestive endoscopy discovered more than 20 polyps in the stomach, 5-10 mm in diameter.

Multiple biopsies were performed from the polyps. Colonoscopy subsequently showed two 1-1.5 cm pedunculated polyps in the sigmoid colon, which were all resected endoscopically.

Histologic examination of bioptic fragments from the stomach, as well as of the polyps removed from the colon, showed proliferation and ramification of myocytes from the muscularis mucosae, surrounding the glandular epithelium and spreading in the submucosa and the muscularis propria. No sign of malignancy was observed.

The presence of buccal pigmentation and multiple polyps as determined by endoscopy suggested a diagnosis of PJS. The patient reported no similar manifestations in other family members; genetic testing was not performed.

The patient was subjected to gastroenterological checkups with periodic gastroscopy and colonoscopy.

Peutz-Jeghers syndrome is a rare familial disorder, characterized by mucocutaneous pigmentation, gastrointestinal and extragastrointestinal hamartomatous polyps, and increased risk of malignancy (2,3).

Cutaneous pigmentation is present in more than 90% of patients with PJS, appearing in early childhood, usually before five years of age, in the form of flat pigmented lesions that are irregularly oval and usually measure less than 5 mm in diameter (4). They are most commonly seen around the mouth, nose, lower lip, buccal mucosa, hands, and feet. Perianal and genital regions may also be involved, whereas the nails are rarely pigmented.

A rare cutaneous manifestation associated with the PJ is longitudinal melanonychia (LM) that presents as a longitudinal pigmented band on the nail (5). LM is frequently observed in other syndromes, such Laugier-Hunziker syndrome which is typically characterized by pigmentation of the oral mucosa but with no systemic manifestations.

Several other syndromes must be considered in the differential diagnosis of nail and mucocutaneous pigmentary abnormalities, including such McCune-Albright syndrome, LEOPARD syndrome, Addison Disease, LAMB syndrome, Gardener syndrome, and Cronkhite-Canada syndrome (6).

LM can have many causes, including genetic predisposition, trauma, drugs, pregnancy, onychomycosis, benign nail matrix nevi, melanoma, and chemotherapeutic agents.

We report on this case to emphasize the peculiarity of longitudinal melanonychia in the PJS and to stress the importance of differential diagnosis of nails pigmentation with regard to other diseases, especially nail melanoma.

Since the patients with PJS are at high risk for a number of malignancies, cutaneous and mucosal manifestation may be very important early signs for proper diagnosis of the syndrome.

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