

Case report: drug-induced melanosis in 21-year-old woman treated by gingival depigmentation

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ABSTRACT

Background: Oral pigmentation can be caused by long-term consumption, smoking or physiology. Drug induced melanosis is one of the oral pigmentation caused by long-term medication use. Changes in the color of the oral mucosa can be and provide local or systemic diagnostics, it is necessary to carry out a significant examination and findings from the patient properly.

Case Report: The method used is a case report with primary data analysis obtained through anamnesis, as well as intra-oral examination

Conclusion: The diagnosis of patients with drug induced melanosis with clinical features found in the gingiva of the maxillary and mandibular anterior teeth, this is because the patient has a history of bronchitis and has been taking antibiotics for a long time. To overcome this pigmentation, the patient underwent OHI and gingival depigmentation treatment and the results showed reduced gingival pigmentation after 1 month postoperatively.

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INTRODUCTION

A healthy oral mucosa has a pink color with a slight physical variety of colors. This tissue consists of keratin, adipocyte lobules, and melanin pigment. Discoloration of the oral mucosa can be significant and show both local and systemic diagnostics, so a proper examination of all oral mucosa is required. Oral pigmentation as manifestation of systemic diseases, medications consumed as well as patient habits can also cause pigmentation of the oral mucosa.¹⁻³

Drug Induced melanosis is a relatively common condition, caused by deposition or increased melanin production due to drug metabolites. Antimalarials, sedatives, antibiotics, antifungals, and phenolphthalein are the most common drugs that induce pigmentation on oral mucosa. Clinically, drug induced melanosis appears as a localized or nonspecific zone from blue pigmentation to diffuse blackness that most often affects the gingiva, tongue, and buccal mucosa.⁴⁻⁶ The patient's medical history and information regarding clinical manifestations facilitate the determination of the exact diagnosis. This case report describes the case of drug-induced melanosis in a 22-year-old female with a history of routinely taking antibiotic and bronchitis drugs who came to RSGM UNJANI for gingival depigmentation treatment.^{3,9-11}

CASE REPORT

A 22-year-old woman came to RSGM UNJANI with a complaint of dark patches on her upper and lower gums since about 8 years ago. The patient does not have a habit of smoking. However, the patient has a history of taking antibiotic and bronchitis drugs for one year of treatment. The patient was once performed a tooth extraction for orthodontic treatment ± 7 years ago. Patient has the

habit of brushing her teeth 2 times a day. The patient has no other disturbing symptoms and has never done treatment to reduce the perceived complaints and felt that she didn't need to alleviate the subjective complaints before. Patients routinely do plaque and tartar cleaning once every 6 months. The patient wants her complaints to be eliminated.

The patient has experienced orthodontic treatment and has a history of bronchitis. The patient has no family history of hereditary diseases and the pigmentation of the oral mucosa. General examinations and signs results within normal limits and there is no swelling and pain in the lymph nodes. Intra-oral examination shows moderate oral hygiene and there is slight calculus and stains in the patient's teeth. A blackish-brown maculae on the upper and lower labial mucosa, gingiva, and hard palate was noticeable. There is also white line caused by cheek biting starting from the premolar region to the first molar on the right and left buccal mucosa, and there is a yellowish-white plaque that can be wiped on two-third posterior part of the tongue dorsum.

The management of this patient at the first visit, the patient is given OHI and IEC including how to maintain oral and dental health, maintain a healthy body or systemic condition and instructions for cleaning and brushing the tongue after brushing her teeth. To reduce pigmentation of the oral mucosa on the patient gingival depigmentation surgery of the gingiva of the upper jaw and lower jaw was carried out. The procedure was done by scraping the surface of the pigmented gingiva with surgical blade and next by covering the area with periodontal pack. The patient was instructed to eat soft meals and brushed her teeth slowly. A month after the surgical gingival depigmentation, the patient returned for control phase, and it was seen

that the gingival pigmentation of the anterior region of the upper and lower gingiva was significantly reduced as in figures 3 and 4.



Figure 3. The patient's clinical condition before gingival depigmentation



Figure 4. Clinical condition of the patient after 1 month of gingival depigmentation

Discussion

This case report discusses drug-induced melanosis in a 22-year-old female patient with a history of routine oral antibiotic and bronchitis drugs who come to RSGM Unjani. The patient came with complaints of dark blackish color on the upper and lower gums since about 8 years ago. The patient does not have the habit of smoking. However, the patient has a medical history of taking antibiotic drugs and bronchitis drugs for one year of treatment around nine years ago. The history of dental and oral diseases also mentions that the patient has had orthodontic treatment. The patient's history of

systemic diseases was of lung and respiratory diseases which was alleviated by taking the drugs. The previous history of the disease mentioned the patient had bronchitis. As for the family history of the disease, it is refuted.

The results of clinical examination showed that there was a blackish-brown diffuse macule in the upper labial and lower labial gingival mucosa, as well as a white cheek bite lesion starting from the premolar region to the first molar on the right buccal mucosa and white cheek bite starting from the first molar to the second molar on the left buccal mucosa. There was also dark brown diffuse macule on the hard palate, accompanied by a yellowish-white plaque that can be wiped on the 2/3 of the tongue dorsum.

Drug-induced melanosis is a condition of deposited or increased melanin production due to drug metabolites. Oral pigmentation can develop rapidly after taking the associated drug once or for several days or years continuously. In this case, the patient has a history of taking drugs within an annual period of time which was the etiological suspect.

In the case, it was stated that there was diffused dark brownish macule in the labial, gingival, and palate areas. These findings were line with the theory that drug-induced melanosis has quite varied manifestations of oral pigmentation, ranging from focal macule to broad diffuse images. The specific color, duration, location, number, distribution, size and shape of pigmented lesions may also be important for diagnostics.

The first visit on November 11, 2021, was carried out by OHI and IEC on how to maintain teeth and mouth, instructions to maintain a healthy body/systemic condition, and cleaning/brushing the tongue after brushing to remove white plaque on the patient's tongue area. In addition, the patient is informed regarding the action to be performed is

gingival depigmentation which is one of the areas of periodontal tissue. The depigmentation carried out with the help from clinicians from Periodontology department. It was started by aseptic procedure, and continued by local anesthesia on upper jaw area by infiltration technique. The gingiva marked with pocket marker to determine the areas which the depigmentation was conducted. Afterward, the scraping of the gingiva was carried on by using scalpel and blade starting from the apical area. After the scaping finished, the parts of the gingiva were tidied up by using periodontal knife, spooled with saline, and covered by periodontal pack. The patients were prescribed antibiotics and analgesics for after-surgical procedure.

The second visit or control visit on December 29, 2021, was observed again after completing a series of gingival depigmentation measures and the results were obtained, namely: the disappearance of the brownish macula in the anterior area of the maxival gingiva and for the brownish macular mandibular area only visible in the patient's interdental area.

CONCLUSION

Drug-induced melanosis is defined as a condition of deposition or increased melanin production due to drug. Drug-induced melanosis is believed to include various mechanism. Normally, people with colored skin has melanin pigment in their mucosa, around the basement membrane. More pigmented area can caused by accumulation of melanin, by inflammation caused by the medication, red blood cell lysis, accumulation of iron which usually caused by antibiotics, or by accumulation of the contents of the drug. Oral pigmentation can develop rapidly after the ingestion of the associated drug once or for several days or years continuously. A detailed medical history of the patient and information regarding clinical

manifestations facilitate the achievement of an appropriate diagnosis. Clinically, *drug-induced melanosis* has a fairly varied picture of oral pigmentation, ranging from focal macula to broad diffuse images. In the case of depigmentation and obtaining the result of the disappearance of the brownish macula in the anterior area of the maxillary gingiva and for the mandibular area of the brownish macula only appears in the interdental area of the patient. The rest still showed the same state as the first meeting.

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