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## THE FIRST REPORT OF GRAPHITE TATTOO IN THE SOFT PALATE: A NOVEL CASE WITH A REVIEW OF ARTICLES

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### ABSTRACT

Pigmented lesions of the oral mucosa can have intrinsic or extrinsic origin. Pigmentation with extrinsic origin occurs by extrinsic agents such as carbon, silver (amalgam), graphite, and iron dust. Graphite tattoos usually appear in response to incidental or intentional thrust of an external object such as pencil lead. Their common site of incidence is the gum and hard palate, and usually occurs in boy children and adolescents. If the dentist cannot make a precise diagnosis for the pigmented lesions considering its clinical conditions, biopsy is necessary for ruling out malignancies including melanoma. In this study, a graphite tattoo has been presented in the soft palate of a 47-year-old woman, which is unique to the best of our knowledge.

A well-defined blue-black symmetric round macule was observed on the left side of the soft palate adjacent to the midline of a 47-year-old woman, 3 mm in diameter, who had referred to oral and maxillofacial medicine ward of faculty of dentistry with complaint of "black nevus has appeared in my soft palate". After extensive reviews across all databases, excisional biopsy was done for the patient using a punch with 3 mm diameter, and a piece of graphite was extracted.

In this case presentation, a unique case to the best out of knowledge was reported according to searches done from 1940 to 2023 in the soft palate of a 47-year-old woman. Surprisingly, the patient had no memory of trauma or thrust of a pencil or breakage of its lead in her oral mucosa.

**KEYWORDS:** graphite tattoo, soft palate, pigmented lesions

### INTRODUCTION

Pigmented lesions of the oral mucosa can have intrinsic or extrinsic origin [Meleti M et al., 2008; De Giorgi V et al., 2009]. Pigmentation with extrinsic origin occurs by extrinsic agents such as carbon, silver (amalgam), graphite, and iron dust. From among them, amalgam tattoos have the highest prevalence [De Giorgi V et al., 2009]. Graphite tattoos usually appear in response to incidental or intentional thrust of an external object such as pen-

cil lead [Adel K et al., 2004]. Their common site of incidence is the gum and hard palate, and usually occurs in boy children and adolescents. The size of graphite tattoos can range from 1 to 15 mm which present as blue-grey-black macules [Anderegg Jr C, Lyles M, 1992; Phillips G et al., 2005; Moraes R et al., 2015]. If the dentist cannot make a precise diagnosis for the pigmented lesions considering its clinical conditions, biopsy is necessary for ruling

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