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# A large oral pregnancy tumor – case report

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SUMMARY

We present a case of a large oral pregnancy tumor which was interfering with maternal nutrition and speech. Surgical treatment was unnecessary in this case because of its spontaneous regression eight weeks after delivery. Owing to this approach, the patient was not exposed to the risk of various perioperative complications. Such cases suggest that a gynecologist should also encourage good oral hygiene.

**Key words**: oral cavity; pregnancy; pyogenic granuloma, pregnancy tumor

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## CASE REPORT

We present a case of a large oral pregnancy tumor in a 29-year-old Caucasian woman. In the 23rd week of her second gestation, the patient noticed swelling in the midline area of the labial aspect of maxillary gingiva. A diagnosis of pregnancy tumor was made after consultation with a maxillofacial surgeon, who ordered a biopsy and prescribed chlorhexidine gluconate mouthwash to improve the patient's oral hygiene. By the 35th week of pregnancy, the tumor had grown to 4 x 3 cm, thus interfering with eating, drinking and speaking. The patient was admitted to our clinic in the 37th week of gestation due to severe bleeding from the oral cavity following tooth brushing. An oral examination revealed a soft tissue mass measuring 5 x 4 cm in size, of central location on the labial aspect of the maxillary gingiva. Excessive dental plaque was detected during clinical examination. The cervical lymph nodes were not palpable. The family history was non-contributory. The patient delivered spontaneously at 38 weeks of gestation. The neonate's condition was assessed as very good. At discharge, the pregnancy tumor was not bleeding. At the follow-up visit 6 weeks after the delivery, the pregnancy tumor had reduced in size and did not bleed on manipulation. The mass spontaneously separated from the gingiva by necrosis of its pedicle 8 weeks after childbirth. The histological examination of the tumor confirmed the diagnosis of a benign pyogenic granuloma.

The major problem in this case was the large size of the tumor interfering with maternal nutrition and speech. In the case of a Cesarean section, difficulties and bleeding during intubation might appear.

## DISCUSSION

Oral pregnancy tumor occurs in approximately 0.2% of pregnancies [1]. The terms "pregnancy tumor," "granuloma gravidarum" or "epulis" are all used interchangeably [2]. Pregnancy is a state during which hormonal chan-

ges appear and may enhance the physiological response to irritation caused by bacterial plaque and gingival inflammation [3]. Approximately 50% of pregnant women experience gingival changes, but only few develop tumors in this area [3]. Etiological factors include the following: improper oral hygiene as well as an increased level of estrogens and progesterone [4].

Estrogens stimulate vascular endothelial growth factor (VEGF) production by macrophages, whereas androgens have an opposite effect. The growth of a pregnancy tumor is related to the production of the abovementioned hormones [5]. Generally, it develops after the third month of pregnancy and increases in size during the second and third trimester [6]. It is a benign, rapidly growing lesion with a tendency to recurrence in the next pregnancy [7]. It usually occurs on the mucous membranes in the oral cavity, but there are some reports about a tumor located in the nasal cavity as well. The tumor is usually situated in the frontal part of the maxilla and rarely causes other symptoms apart from its very presence [8]. Despite the fact that pregnancy tumor appears more commonly on the facial aspect of the gingiva rather than on the lingual aspect, it has also been found between teeth [9]. Although the tumor itself is benign, a large epulis may result in the inability to close the mouth and cause bleeding or loosening and migration of teeth [8]. The size ranges from a few millimeters to several centimeters, but rarely exceeds 2.5 cm [2,10].

**Fig. 1.** Pyogenic granuloma in week 37 of gestation

**Fig. 2.** Pyogenic granuloma in week 35 of gestation

Histologically, the most common type of a pregnancy tumor is the granulomatous type, composed mainly of capillary vessels and proliferating endothelial cells, typically accompanied by infiltrated inflamed cells [3,4,9].

## TREATMENT

The management of pregnancy tumor depends on the size of the lesion and on the severity of symptoms. If the tumor is small and does not bleed, clinical observation is recommended, and the treatment includes improvement of oral hygiene to remove irritating factors [4]. The surgical treatment is usually unnecessary as spontaneous regression is typical in 75% of cases after 1–4 months after labor [11]. However, there are some reports where granuloma did not regress completely after pregnancy and resection was required even five months after delivery [9]. In the case of bleeding and pain following tooth brushing or eating, removal of causative irritants should be advised and conservative surgical excision recommended and performed preferably in the second trimester of gestation by electrocoagulation. Liddenmuller and co-workers described surgical treatment of pregnancy tumor with the use of CO2 lasers [12].

### Differential diagnosis

The differential diagnosis should include: hyperplastic gingival inflammation, peripheral ossifying fibroma, hemangioma, Kaposi's sarcoma, angiosarcoma, non-Hodgkin lymphoma and metastatic cancer. Biopsy findings are critical to establishing a definitive diagnosis [13].

## SUMMARY

In comparison to other reported cases, the lesion in our case was significantly bigger and symptomatic. Fortunately, the patient did not develop anemia, and conservative management during pregnancy was completely sufficient. Benefits of the conservative approach in cases of such large pregnancy tumors, such as avoiding exposure to surgical complications, should be emphasized. The greatest problem in this case was the size of the tumor, which made eating and speaking difficult.

Optimal oral health is very important for the proper course of pregnancy and fetal well-being. Appropriate cooperation between gynecologists/obstetricians and dentists might prevent the development of pregnancy tumors and improve obstetric outcomes. Both obstetricians and midwives should encourage proper oral hygiene and frequent dental check-ups during pregnancy.

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