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CASE REPORT

The importance of clinical dental examination in the prevention of colorectal cancer: a case report

Larissa Sandes Fraga [1]Paulo Henrique Luiz de-Freitas [2] Carolina Vieira Valadares-Souza [3] Gustavo Almeida Souza [3]*

Abstract:

The clinical dental examination has a great importance to establish diagnosis and treatment plan, besides that, for a well-trained dentist, can be an important tool to discover serious diseases in other organs and systems, for example Gardner's Syndrome (GS). This Syndrome is a rare and hereditary disease, characterized by familial colorectal polyposis. Other alterations are epidermoid cysts, osteomas, odontomas may be present in this syndrome. The precocious diagnose of the disease its important, because the colorectal polyposis have a high malignant potential. This paper aims to report a case of GS diagnosed after a routine dental appointment. A 23-year-old female patient was attended at a public university in Brazil and reported hardened nodules in the mandible. In the radiographic exam, circumscribed radiopaque images suggestive of multiple osteomas were observed in the jaws. In addition, the patient had reported a family history of colorectal cancer and removal of an epidermoid cyst in her leg 5 years ago. The patient was referred to the university's Coloproctology department, where colonic polyposis was found after colonoscopy. The histopathological reported adenoma, without signs of malignancy. The present work demonstrated that an accurate dental clinical examination can be a tool to assist the dentist in the discovery of serious diseases in organs and systems unrelated to his area of expertise.

Keywords: Gardner's Syndrome, Osteoma, Epidermal Cyst.

[1] CIA - Aracaju, post-graduate student - Aracaju - Sergipe - Brasil.
[2] Federal University of Sergipe at Lagarto, Department of Dentistry - Lagarto - Sergipe - Brasil.
[3] University Center AGES at Paripiranga, Department of Dentistry - Paripiranga - Bahia - Brasil.

Correspondence to:
Gustavo Almeida Souza
E-mail: gustavosouzabmf@gmail.com

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INTRODUCTION

The clinical dental examination is an important tool on buccal pathologies diagnosis and a fundamental step for elaboration of a dental treatment plan. During the clinical examination, an attentive dentist may suspect the existence of serious diseases in other organs and systems, from manifestations in the oral cavity, jaws and other segments[1-5]. An example of this is the Gardner´s Syndrome.

The Gardner´s Syndrome is a serious and rare disease that the recognition of facial clinical signs can be essential in the early diagnosis of the disease and, therefore, in the patient's survival. That syndrome was first described by Gardner and Stephens in 1950[6-8] and it is an inherited, autosomal dominant disease with almost 100% penetration. The disease is determined by the mutation of the *Adenomatous Polyposis Coli* gene, being considered a variant of Familial Adenomatous Polyposis[9-10].

The main concern of GS is the high mortality rate due to the malignant transformation of intestinal polyps (invasive adenocarcinomas). It is estimated that 50% of patients with the syndrome with 30 years old already have colorectal adenocarcinomas and that this rate is close to 100% in older patients, so early diagnosis is essential for patient survival[11].

Among the manifestations of the syndrome are epidermoid cysts[12], odontomas, cranial and jaw osteomas, which may even manifest before colonic lesions[13,14]. In this context, the dentist can be the first health professional to have contact with syndromic patients.

The present report aims to present a case of GS, highlighting the anamnestic and physical examination details that culminated in the early discovery of the disease, during a routine dental consultation.

CASE REPORT

A.P.S.C. patient, 23 years old, female, came to the School Clinic of a public university in Brazil to have a routine dental consultation complaining of an increase in volume in the face started 2 years ago. As personal record, she referred to a removal of an epidermoid cyst in the left lower limb five years ago. As familiar record, she referred that her mother died of colorectal cancer one year ago. The patient denied having any habit and addiction, such as smoking and using illicit drugs. The extra-oral physical examination showed a tumor lesion in the right posterior mandibular region, another in the left side and a slight, painless, hard, fixed consistency increase in the right infraorbital maxillary region, suggestive of bone lesion (Figure 1). The intraoral physical examination did not reveal any dental abnormalities.

Panoramic radiography showed images suggestive of multiple osteomas in the maxillary bones (Figure 2). After association of the data collected during the interview to clinical and radiographic findings, there was a doubt whether the patient had only multiple osteomas in the jaw, or facial expressions of a syndromic condition.

Because of this, the patient was referred to the gastroenterology and coloproctology service of hospital of the public university in Brazil for evaluation and carrying out complementary exams. Colonoscopy identified colonic polyposis (Figure 3). During examination, some polyps were biopsied, and the histopathological report was adenoma without signs of malignancy.

Bone lesions that caused an unsightly appearance were removed and the material obtained, after histopathological analysis, confirmed the osteoma hypothesis (Figure 4). Based on clinical and radiographic findings, the Gardner's Syndrome was confirmed.

Figure 1. A. Volume increase in the right infraorbital region. B: Volume increase in the left side of the mandible.

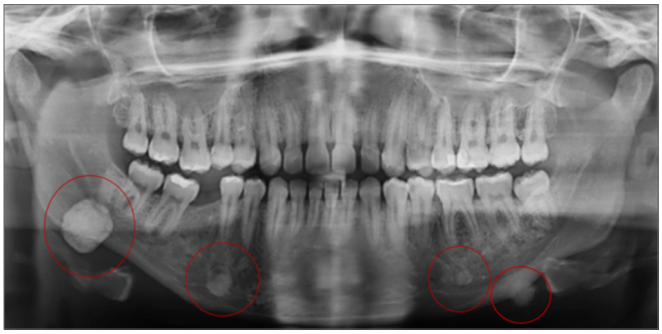

Figure 2. Panoramic radiograph showing multiple radiopaque lesions suggestive of osteoma.

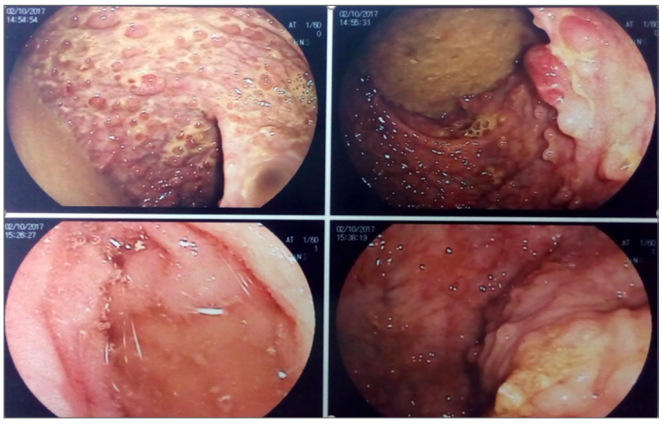

Figure 3. Colonoscopy exam showing colonic polyposis.

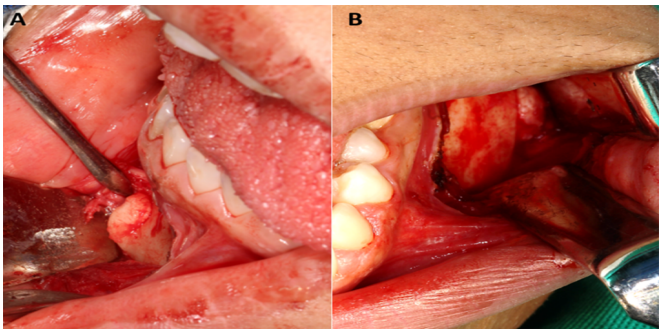

Figure 4. A-B. The removal of osteomas that were causing aesthetic complaints.

Nowadays, the patient is being followed up with the gastroenterology and coloproctology team at the University Hospital and is waiting for a total colectomy and ileorectal anastomosis to be performed, to prevent the malignancy of colonic lesions.

DISCUSSION

The case presented demonstrates that dental anamnesis associated with accurate clinical examination can be extremely important in the discovery of serious diseases, such as GS. If the proposed dental treatment involves only removing the lesions from the jaws, neglecting the patient's personal history, the disease will probably evolve in the future and the prognosis would be much worse. This case also demonstrates that all information given by patients deserves a careful analysis and consideration[1-3].

Regarding the treatment used, colonoscopy was essential in the discovery of colonic polyposis and the biopsies performed on these polyps attested that the disease was still in its initial stage. Therefore, the patient was able to benefit from the early discovery of the disease. Now, the patient is waiting to undergo a prophylactic colectomy, which consists of surgical removal of all or part of the colon. Early surgery is commonly recommended as it is the only curative therapeutic modality in the treatment of polyps and neoplasia[11,15,16]. Therefore, it is suggested that the dentist refer the patient quickly to the gastroenterologist when GS is suspected.

Other resources to aid in the diagnosis of the syndrome are history of the appearance of skin lesions, ophthalmoscopy to detect hypertrophy of the retinal pigment epithelium, panoramic radiographs to detect osteomas and dental anomalies[13]. In the case presented, the lesions that caused aesthetic changes were removed and the material provided histopathological information relevant to the diagnosis of the syndrome. In addition, the patient reported that, at the end of the first decade of life, the presence of an epidermoid cyst in her leg was detected, which had already been removed.

Finally, the clinical case reinforces that the oral cavity, maxillary bones and oral attachments can prove to be important regions for manifestations of serious systemic diseases. The dentist must be familiar with these signs, in order to intervene early in an interdisciplinary way with other areas of health, and always remember that the oral cavity cannot be assessed in a way dissociated from the other organs and systems[1–5].

CONCLUSION

The dental clinical examination is a fundamental tool for the diagnosis of oral pathologies and can assist the dentist in the discovery of serious diseases in organs and systems unrelated to his area of expertise.

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