
AN INTERESTING CASE OF AN ODONTOGENIC KERATOCYST OF THE LOWER JAW MIMICKING CARCINOMA

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Abstract: The aim of this paper is to present an uncommon aspect of odontogenic keratocyst mimicking carcinoma. This case report concerns a 56 years old man with pain, swelling and an extraoral fistula of the skin of the chin of the lower jaw. The patient is admitted for emergency treatment. An orthopantomography was done and the result showed a cyst, which covers almost the entire lower jaw. At first the patient was treated with a combination of two antibiotics. After seven days, when the inflammatory process was under control, the lower jaw formation was removed under general anesthesia.

Introduction: The keratocyst is the second most frequent odontogenic cyst and is one of the most aggressive ones owing to its high recurrence rate and its tendency to invade the adjacent tissues. Keratocysts are benign lesions that can be very aggressive so it's very important to act early and diagnose them promptly.

Purpose: Presenting an interesting and uncommon case of an odontogenic keratocyst of the lower jaw mimicking carcinoma.

Case report: The patient is admitted for emergency treatment. The orthopantomography showed a cyst, which covers almost the entire lower jaw. The traditional method for the treatment of most odontogenic keratocyst is surgical enucleation. In the first stage were performed an intraoral incision, an expansion of the extraoral skin fistula and placement of rubber drains. The patient was treated with a combination of two antibiotics.

When the inflammatory process was under control the lower jaw formation was removed under general anesthesia. The excision of the extraoral fistula was performed and it was closed plastically.

Conclusions: This case highlights the importance of accurate diagnosis of odontogenic keratocyst, considering its potentially aggressive and infiltrative behavior, and is essential for proper patient therapy and follow-up.

Keywords: odontogenic, keratocyst, lower jaw, extraoral fistula, mimicking carcinoma

1. INTRODUCTION

The World Health Organization classifies the keratocyst as odontogenic cysts that develop from non-inflammatory tissue from the cellular remains of the dental lamina. [1,2,3] They are made up of remnants of odontogenic epithelium and are the second most frequent odontogenic cyst. [1]

The odontogenic keratocyst was first identified and described in 1876 and further it was classified by Hans Phillipson in 1956 in a Danish publication. [4,8] The designation *keratocyst* was used to describe any jaw cyst in which keratin was formed to a large extent. [8]

The histopathology of odontogenic keratocyst is typical and includes: a thin, uniform lining of stratified squamous epithelium with tendency to detach from the underlying connective tissue capsule; a thin corrugated surface layer of parakeratin; a spinous cell layer 8 to 4 cells in thickness, often showing intracellular oedema; a flat epithelial-fibrous tissue junction, usually devoid of epithelial rete ridges; and a relatively thin fibrous capsule that lacks inflammatory cell infiltrate. [7,8]

Odontogenic keratocyst accounts for 3-11% of all the odontogenic cysts and is one of the most aggressive ones owing to its high recurrence rate and its tendency to invade the adjacent tissues. [4] That is why it is very important to act early and diagnose them promptly in order to provide adequate management and, if possible, to limit (with treatment) their expansion or growth. [1]

Treatment for keratocysts can be conservative or radical surgical and the surgeon who is in charge of the case and the patient, makes the last decision, based on the characteristics it presents and adapting the best treatment for the patient's case. [1]

2. CASE REPORT

In this case report we present a 56 years old man with pain, swelling and extraoral fistula of the skin of the chin of the lower jaw (Fig. 1). The patient is admitted for emergency treatment. An orthopantomography was done and the result showed a cyst, which covers almost the entire lower jaw (Fig. 2).



Fig. 1. Extraoral fistula of the skin of the chin of the lower jaw



Fig. 2. Orthopantomography before surgery

According to the characteristics of the case and adapting the best treatment for the patient's case in the first stage were performed an intraoral incision, an expansion of the extraoral skin fistula and placement of rubber drains. Then the patient was treated with a combination of two antibiotics – Clindamycin 600 mg and Gentamicin 0.80 mg, both intravenously over five days, with Clindamycin administered three times daily and Gentamicin – twice. After seven days the inflammatory process was under control and the lower jaw formation was removed under general anesthesia (Fig. 3). During the surgery muco-periosteal flap was dissected. Due to the patient's refusal to carry out the appropriate endodontic treatment and retreatment all teeth from 47 to 35 inclusive were extracted.



Fig. 3. Cavity after removal of the cyst



Fig. 4. After the thread is placed

Our surgical approach involved trepanation of the mandibular bone. The complete formation was extirpated and sent for histological examination. The excision of the extraoral fistula was performed and it was closed plastically (Fig. 4).

The mucoperiosteal flap was sutured and after the removal of the formation an iodoform drain was placed in the cavity which was formed. The drain was completely removed on the third day, because otherwise if it remained there it would start to gather.

3. DISCUSSION

The odontogenic keratocyst is an enigmatic developmental cyst that deserves special attention because it has characteristic histopathological and clinical features, but, what makes this cyst special is its aggressive behavior and high recurrence rate. [8]

The odontogenic keratocyst can occur at any age and anywhere within the jaws. Odontogenic keratocysts, like other jaw cysts, are symptomless until the bone is expanded or they become infected. [5] Swelling is the most common presenting complaint, however, they may be asymptomatic and discovered accidentally during routine controls. [9] Patients usually seek help if deformities in the bones are noticed or if spillage of cystic pus or a fistula is present. [5,6]

In the reported case the cyst mimics the clinical features of carcinoma and thus can be confused with the same. Differential diagnosis must therefore be executed in order to accurately identify the lesion. [9] Diagnosis of odontogenic keratocyst is often very difficult because its clinical and radiographic aspects are aspecific. [9] In the clinical case under examination, the patient reported pain, swelling and extraoral fistula of the skin of the chin of the lower jaw. After all examinations it was found that this is a keratocyst disguised as carcinoma due to the presence of a skin fistula and the large melting of the jaw.

It is important to underline that the patient has a very poor oral hygiene. He refused to treat the existing teeth which forced the surgeons to extract them during the operation. He also refused to buy an artificial bone and a membrane to complement this large cavity after removing the large formation.

4. CONCLUSIONS

Over the years odontogenic keratocyst have been the subject of many researches with respect to its origin, its growth, and treatment modalities. [5] In most of the cases the keratocysts are aggressive and have a high recurrence rate, thus, the clinical, radiographic, and histopathological correlations are essential for proper diagnosis, treatment and follow up. [5]

In this article we report a case of surgical therapy of an interesting case of an odontogenic keratocyst of the lower jaw mimicking carcinoma. This case highlights the importance of accurate diagnosis of odontogenic keratocyst, considering its potentially aggressive and infiltrative behavior, and is essential for proper patient therapy and follow-up.

AUTHOR CONTRIBUTIONS

Dr. Rosen TSOLOV is responsible for the diagnostic procedures, clinical diagnosis, treatment decisions, performed the surgery and also wrote the manuscript. Assoc. Prof. Georgi YORDANOV has read and agreed to the published version of the manuscript.

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