

Cutaneous Fistula of Dental Origin: How to Identify it to Better Treat It

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Abstract

Cutaneous fistulas of dental origin are rare and often remain unrecognized by practitioners and confused with dermatological lesions, they lead the patient to consult various specialists; and undergoing inadequate drug or surgical treatment, leaving permanent scars. So how can we circumvent all these ambiguities in order to ensure better care? The purpose of this work is to clarify certain Gray areas through a clinical case. Chronic endodontic complications are the most frequent causes of cutaneous fistulas of the face and neck. Diagnosis is often delayed because of the weak symptomatology. A meticulous clinical and radiological examination is revealing of the causal tooth and confirms the diagnosis. The etiological treatment allows in the majority of cases alone the disappearance of the cutaneous fistula, but sometimes for old fistulas with significant adhesions and scar tissue an intervention cosmetic surgery is required.

Introduction

Local, regional and remote infectious complications of dental origin are very common in our daily practice. It has been demonstrated that the mandibular incisor-canine block generates half of the cutaneous fistulas. Next come the mandibular premolars and molars for 39%, then the maxillary premolars and molars for 13% and finally the maxillary incisors and canines for 8%. These lesions constitute an infectious complication of poorly or untreated pulp necrosis and generally pose a diagnostic problem because the causal tooth may be asymptomatic. Indeed, the cutaneous fistula is often confused with dermatological lesions, leading the patient to consult various specialists; and undergoing inadequate drug or surgical treatment, leaving permanent scars, while denying the dental problem, which inevitably leads to treatment failure [1].

Through this work, we will emphasize the importance of establishing a correct etiological diagnosis in order to adapt the action to be taken which makes it possible to obtain the healing of the cutaneous fistula of dental origin.

Observation

This is a 50-year-old patient, in good general condition, referred for a skin lesion refractory to drug treatment (antibiotic therapy) evolving for 2 months. The questioning revealed the notion of several consultations with dermatologists with prescription of antibiotics and anti-inflammatories, without regression. skin all around (Fig.1). The endobuccal examination showed a bottom of the free vestibule, a normal-looking mucosa as well as a coronary crack at the level of the left mandibular canine (33) (Fig.2). The radiological examination revealed the presence of a peri-apical lesion related to this tooth (Fig.3). The diagnosis of cutaneous fistula whose origin is a chronic apical periodontitis related to the 33, is retained [2].



Figure 1: Clinical view of the skin fistula (crusty appearance).



Figure 2: Highlighting of a coronary crack at the level of 33.



Figure 3: Preoperative retroalveolar radiograph: Radiolucent image related to the (33).

An endodontic treatment was carried out at the level of 33 (Fig.4), an inter-session medication based on calcium hydroxide was put in place (Fig.5), but the patient missed his appointment and returned to consult six weeks later with a surinfected fistula causing serosities to arise (Fig.6). The inter-session medication based on calcium hydroxide has been renewed. After 15 days, the evolution seems to be favorable. Indeed, a regression of the lesion was observed (Fig.7). There are no intraoral manifestations. Canal obturation was performed (Fig.8) and retractile healing of the fistula was observed one month apart (Fig.9).

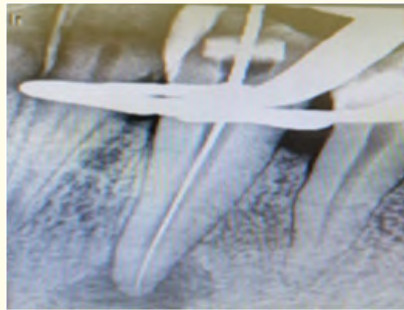


Figure 4: endodontic treatment at the level of 33 (file x-ray in place).



Figure 5: Inter-session medication: Ca(OH)₂ at the (33).



Figure 6: surinfected fistula at 6 weeks.



Figure 7: Regression of the lesion after placement of the (ca(OH)₂ for 2 weeks.



Figure 8: Root canal filling.



Figure 9: Retractable healing of the fistula.

Discussion

In the absence of symptoms, the dental origin is not always mentioned. In this case, the radiological examination takes all its interest to guide the etiological diagnosis. This examination includes retro alveolar images, a panoramic X-ray or also a bea cone. A retro-alveolar radiograph can be performed with a fine-diameter cone of gutta inserted into the fistulous path. This technique makes it possible to objectify this path which is at the origin of the infection and to identify the necrotic causal tooth in order to adjust the therapeutic attitude [3-4].

In our case, visualization of the fistula tract by a gutta percha cone is not possible because the fistula is closed. On the other hand, the retroalveolar X-ray revealed the presence of a radiolucent image hanging from the apex of the left mandibular canine (33), this tooth does not present a carious lesion, but the use of methylene blue reveals the presence of a coronary fissure. The diagnosis retained for this tooth is acute apical periodontitis, which is the cause of the cutaneous fistula. According to Brown et al., the cutaneous fistula is secondary to an infectious focus of endodontic origin in 71% of cases. It has also been demonstrated that cutaneous fistulas of dental origin appear more at the mandibular level (80%) than at the maxillary level (20%), they are often observed in the lower genius and chin regions.

Early diagnosis and rapid and appropriate management can minimize patient discomfort, avoid aesthetic inconvenience and the possibility of other infectious complications such as sepsis or osteomyelitis. In the case reported, the dental origin has been confirmed. At the first consultation, the clinical and radiological examinations point to the infectious focus on 33. Regarding the therapeutic aspect, the main objective is to eliminate the source of the infection by treating the causal tooth [5].

It has been shown that endodontic treatment with a step of root canal disinfection with calcium hydroxide can result in the disappearance of the fistula within 3 months. Indeed, the etiological treatment is the guarantor of success in the management of cutaneous

fistulas of dental origin. It can be radical by extraction or conservative as in our case. After complete shaping to working length, if the canal is dry, the fistula is non-productive and the tooth is asymptomatic, the canal system can be filled. immediately. Otherwise we must go through canal disinfection sessions with calcium hydroxide.

For our clinical case, after the complete shaping the canal showed serosities. We thus proceeded by setting up a Ca(OH)_2 with an appointment at 2 weeks. The unmotivated patient consulted at 6 weeks following reinfection of the fistula. In this case, the renewal of the Ca(OH)_2 and the prescription of antibiotic therapy are necessary. Antibiotic therapy is not systematic for the treatment of cutaneous fistula, but it is indicated when there are signs of systemic damage such as fever or the presence of lymphadenopathy [6].

In certain situations and even following a correct etiological diagnosis associated with satisfactory endodontic treatment, the lesion does not regress. This is the case of old so-called rebel fistulas. In this situation, a fistulectomy is necessary. In our case, after one month of follow-up, there is a regression of the lesion with the persistence of a retractile scar. The patient is satisfied with the result and has no aesthetic damage.

Conclusion

Cutaneous fistulas have pulp necrosis as their main etiology, so their presence in the cervico-facial region should alert doctors to the need to refer patients to dental surgeons to eliminate a dental cause. A number of factors are involved in the externalization of pus such as the relative position of the apices with the bony tables, the muscular insertions and the distribution of the cellular tissue. This is because pus will always choose the path of least resistance. This is how the dental infectious origin is the first etiology to consider.

The radiological examination takes all its interest for the etiological localization. A fast and adequate care of the causal tooth will make it possible to reduce the aesthetic inconveniences as well as the irreversible tissue destruction. In fact, the etiological treatment allows in the majority of cases alone the disappearance of the cutaneous fistula within a period of less than two weeks, even for old fistulas.

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