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**Clinical Case**

# Thoracic and Mammary Spread of Cellulitis of Dental Origin: A Case Report

## *Diffusion thoracique et mammaire d'une cellulite d'origine dentaire: à propos d'un cas*

Nkolo Tolo Francis Daniel[1], Kwedi Karl Guy Gregoire[1], Edouma Bohimbo Jacques Gerard[1,2], Nokam Abena Marie Elvire[1,3], Bengondo Messanga Charles[1,4]

**Affiliations**
[1] Faculty of Medicine and Biomedical Sciences of the University of Yaoundé 1, Department of Oral, Maxillofacial and Periodontology Surgery
[2] Service of Oto-Rhino-Laryngology and Cervico-Maxillo-Facial Surgery of the Central Hospital of Yaounde
[3] Dental service, Central Hospital of Yaoundé
[4] Service of Odontostomatology, University Teaching Hospital of Yaounde

**Corresponding author**
Nkolo Tolo Francis Daniel; Faculty of Medicine and Biomedical Sciences of the University of Yaoundé 1, Department of Oral, Maxillofacial and Periodontology Surgery; 694144681; nkolo.tolo@fmsb-uy1.cm

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**Mots clés** : cellulite cervico-faciale, diffusion thoracique et mammaire, miel naturel

**RÉSUMÉ**

Cervico-facial cellulitis is extensive and are redoubtable polymicrobial infections because they can jeopardize the vital prognosis. Spreads to other regions of the face and neck are rare forms and have a poor prognosis. We report a case of thoracic and mammary spread of odontogenic cellulitis in a 39-year-old woman with no contributing antecedent. The signs were unremarkable at first. However, the clinical manifestations during the evolution were rapidly severe. The clinical signs consisted of an odynodysphagia, hypersialorrhoea, trismus, laryngeal dyspnoea, asthenia and fever. An intravenous antibiotic therapy based on Amoxicillin + Clavulanic acid and Metronidazole for 05 days, then modified to Ampicillin / Gentamycin / Metronidazole for 03 days due to financial difficulty. Oral relay with Amoxicillin + Clavulanic Acid and Levofloxacin was started on D8. Lifting of the trismus thanks to mechanotherapy with a cork stopper allowed the extraction of the causal tooth on D4. Drug treatment was associated with surgical drainage of abundant pus which emerged at the level of the neck, thorax and breasts, and in relation with an extensive necrosis of the neck and thorax. Under this intensive treatment, the evolution was favorable in twelve days with good healing thanks to natural honey.

**ABSTRACT**

Les cellulites cervico faciales sont des infections polymicrobiennes extensives et redoutables car pouvant mettre en jeu le pronostic vital. Les diffusions vers d'autres régions de la face et du cou sont des formes rares et de mauvais pronostic. Nous rapportons un cas de diffusion thoracique et mammaire d'une cellulite odontogène survenue chez une femme de 39ans sans antécédents contributifs. Les signes étaient peu évocateurs au début. Cependant les manifestations cliniques au cours de l'évolution étaient rapidement sévères. Les signes cliniques comportaient une odynodysphagie, une hypersialorrhée, un trismus, une dyspnée laryngée, une asthénie et de la fièvre. Une antibiothérapie intra veineuse à base d'amoxicilline + acide clavulanique et métronidazole pendant 05 jours puis modifiée par Ampicilline/ Gentamycine/ Métronidazole pendant 03 jours pour difficulté financière. Le relais oral fait d'Amoxicilline + Acide Clavulanique et Lévofloxacine a été instauré dès J8. La levée du trismus grâce à la mécanothérapie au bouchon de liège a permis l'extraction de la dent causale à J4. Le traitement médicamenteux était associé à un drainage chirurgical d'un pus abondant qui faisait issue au niveau du cou, du thorax et des seins, et en relation avec une nécrose extensive du cou et du thorax. Sous ce traitement intensif, l'évolution était favorable en douze jours avec une bonne cicatrisation grâce au miel naturel.

## INTRODUCTION

Cervico-facial cellulitis is a polymicrobial disease of the cellulo-adipose tissue of the face and neck, often complicating dental infection. They spread indirectly via septic emboli but most often by contiguity towards the cervical, thoracic or other regions [1,2]. It is a serious condition which may jeopardize the vital prognosis [3]. We report the case of a young woman who presented a thoraco-mammary spread of cervico-facial cellulitis, the origin of which was an infection of 48.

## CASE PRESENTATION

This is a 39-year-old patient, housewife, residing in the city of Soa, observed in the Oto-Rhino-Laryngology and cervico-maxillo-facial surgical unit of the Central Hospital of Yaoundé, who reported a dental pain evolving for a week. She was treated only with anti-inflammatories, followed by a combination of Amoxicillin and medications from the traditional pharmacopoeia. The patient had no particular antecedent.

At the first consultation, the patient presented with inspiratory dyspnoea, a hoarse voice, an odynodysphagia, hypersialorrhoea associated with purulent sputum and fetid breath. We noted a submental tumefaction, a trismus at two fingerbreadths as well as a cutaneous fistula in the anterior cervical and upper thoracic region, letting pus well up (Figure 1).


Figure 1: Clinical aspect of the patient

The intraoral examination, made difficult by trismus, showed an edema of the mouth floor. Panoramic X-ray showed a radiolucency around the 48 suggesting a radiculo-dental cyst. In an emergency, under oriented local anesthesia, drainage incisions were made and associated with a necrosectomy (Figure 2).

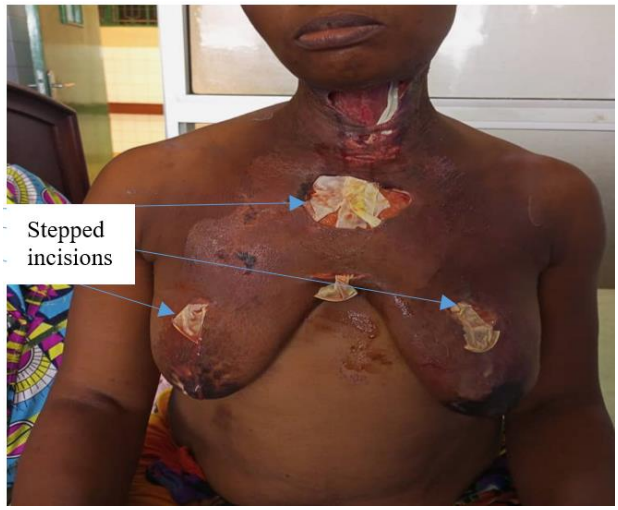


Figure 2: Incision and drainage of purulent collections

Irrigation washes with 0.9% normal saline, Dakin Cooper stabilized and hydrogen peroxide at 10 volumes were performed twice a day for 12 days. Mechanotherapy with a cork stopper aided to lift the trismus and made it possible to extract the causal tooth on D4. Biological assessment showed a hyperleukocytosis, moderate anemia and fasting hyperglycemia. The initial intravenous antibiotic therapy combining Amoxicillin + Clavulanic Acid and Metronidazole was started then, for financial difficulty, modified on D5 with the injectable forms of Gentamycin, Ampicillin and Metronidazole for 3 days. On D8, the oral route being available, a relay was established based on Amoxicillin + Clavulanic Acid and Levofloxacin. After 08 days of hospitalization, an improvement in general condition was observed, with normalization of biological assessments. Locally, there was a decrease in cervico-facial swelling and less soiled dressings.

From D12, we observed a drying up of purulent secretions and dressings were made with natural honey and yellow betadine every two days (Figure 3).

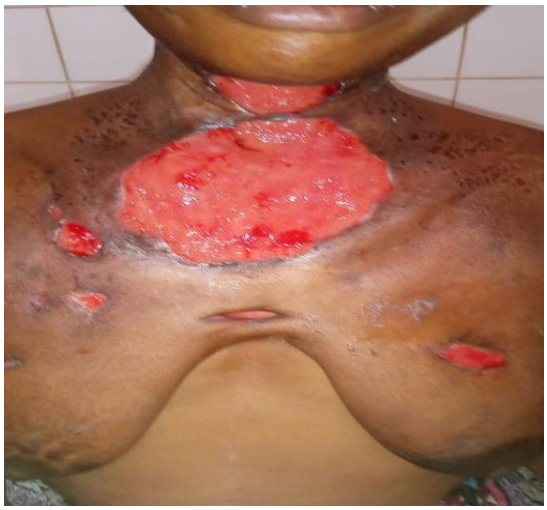

Figure 3: Appearance of wounds on day 12 of hospitalization

Dressings were continued on an outpatient basis and the patient is getting better and better. (Figure 4,5).


Figure 4 and 5: wounds on day 17

## DISCUSSION

Cervico-facial cellulitis with thoraco-mammary extension is rare and has a poor prognosis [2]. Some authors are unanimous on the dental origin of this condition, which spreads via the deep spaces of the face and neck due to a particular anatomy and vascularization [1]. The risk factor found in our case was the intake of nonsteroidal anti-inflammatory drugs which exacerbate the inflammatory response and lowers immunity. Other factors such as alcoholism, immunosuppression states are described in the literature [3]. The diffuse form of cervico-facial cellulitis results in many cases in the delay in management in our context, linked to negligence, self-medication and poverty [4]. Drug treatment involves bi or tri-antibiotic therapy associated with surgical treatment [5,6]. Levofloxacin is considered a reasonable but expensive alternative to β-lactams for the treatment of skin and soft tissue infections. Its advantages are: broad spectrum of action, rapid bactericidal activity, extensive tissue penetration, excellent bioavailability and ease of administration. Its use in our case made it possible to maximize compliance, broaden the spectrum of activity and increase the speed of bactericidal activity [7]. Whatever the appearance of cellulitis, surgical treatment should not be limited to a simple incision-drainage gesture, but should allow the flow of purulent secretions as long as they exist [8]. The extensive loss of substance caused by the infection could be partially controlled by honey during regular dressings. Honey has an undeniable beneficial effect on wound healing [9,10].

## CONCLUSION

Cervico-facial cellulitis is a serious infection. Thoraco-mammary diffusion is rare and spectacular. It has a poor prognosis and leads to significant aesthetic and functional sequelae. Emphasis must be placed on prevention, especially in our unfavorable socio-economic context.

## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

## AUTHORS' CONTRIBUTIONS

Nkolo Tolo Francis Daniel, Kwedi Karl Guy, Edouma Bohimbo Jacques operated and monitored the patient postoperatively.

Nkolo Tolo Francis Daniel wrote the manuscript; Edouma Bohimbo, Nokam Abena, read and corrected the manuscript. Bengondo Messanga Charles supervised the drafting of the manuscript. All authors validated the final version of the article.

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