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Facial Odontogenic Thrombophlebitis: Case Report

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Abstract : *Facial thrombosis can be complicated by cavernous sinus thrombosis, which is life-threatening if management is not adequate*
thrombophlebitis of the facial veincommenlypresentwith facial erythema, tenderness, and swellingabove the involvedvessel. It is rare and generallycomplicatesinfectiousmaxillofaciallesions.
Diagnosisisessentiallyclinical and the management is base on boadantibiotictherapycombinedwitheradication of the infectiousfoci. The anticoagulation isusedwhen cases are serious and complcated.
Facial thrombophlebitiscanenvolveintocavernousthrombosis, whichis life-threateningwhen management is not apropriate.
Keyswords *: Facial venousthrombophlebitis, Cavernous sinus thrombophlebitis ,Thrombosis, Infectiousmaxillofacialpathology*

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I. Introduction

Cranio-facial thrombophlebitis is an anatomo-clinical entity whose first description dates to more than 150 years (1). Today it is about facial vein thrombosis and cerebral venous thrombosis. (2)
Facial venous thrombosis has become rare as a result of good control of infections and is now only sporadically described (3-4), its diagnosis is mainly clinical, and its infectious origin is also dominant (in 95% of cases). (1)

Clinical observation

A 21-year-old woman came into the department of oral surgery for a filling of the vestibule floor opposite to the left upper premolar canine area that has a beginning of cellulitis due to an infection outbreak related to 22. (Figures 1, 2, and 3)

Figure 1: Swelling at the left hemiface associated with edema of the lower left eyelid

Figure 2: Retro-alveolar X-ray showing a radiolucent image between 22 and 23

Figure 3: Filling the vestibule floor from 22 to 24

Immediately an endodontic and mucosal drainage was proceeded followed by a prescription of antibiotics (amoxicillin + clavulanic acid) and an analgesic. (Figure 4).

Figure 4: Mucous drainage

The patient returned after 48 hours in a bad condition; she was experiencing swelling on the left of her face, characterized mainly by palpebral edema on her upper eyelid, exophthalmia, and a nasojugal endometrium cord associated with hypoesthesia of the infraorbital area as well as an obliteration of the nasojugal fold. (Figure 5)

Figure 5: swelling after 48h, palpebral edema on upper eyelid, nasojugal endometrium cord

After acute circumscribed cellulitis, and according to its results, the patient was diagnosed with facial thrombophlebitis, which is a rare complication of odontogenic infection.
The therapeutic management was essentially an eradication of the infectious focus:
• The Surgical excision of the apical lesion of the 22, and the anatomopathological study confirmed a histological diagnosis of an inflammatory root cyst; (Figures 6, 7, 8, 9, and 10)
• Broad-spectrum intravenous (IV) antibiotic therapy (amoxicillin IV 1G 3 times daily for 10 days + metronidazole IV 250 mg 3 times daily) with I analgesic and local antiseptic (chlorhexidine)
• Endodontic treatment of the tooth 22
• Monitoring the vitality of the 23

A check-up was made after 15 days; the situation improved and there was a total disappearance of the edema. (Figure 11)

Figure 6: Preoperative view and anesthesia

Figures 7 and 8: total enucleation of the lesion

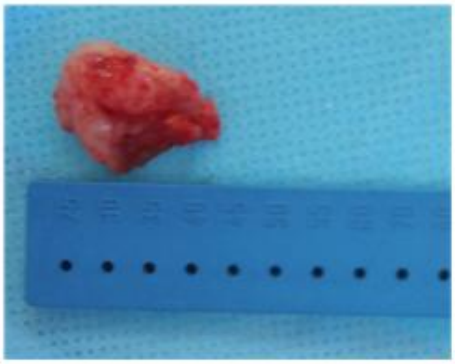

Figure 9: Size of the lesion after excision

Figure 10: Repositioning the flap and sutures

Figure 11: Checkup after 15 days, improvement of patient's condition

II. Discussion

The literature review revealed only a limited number of facial thrombophlebitis after 1986. (1) The Virchow triad defines the main pathogenic factors that causes Thrombosis: venous stasis, parietal abnormalities and haemostasis disorders. (5-6) Infectious processes also favor the appearance of parietal abnormalities, venous stasis and haemostasis disorders. (7)

Thrombosis of the cavernous sinus is founded in most cases, and this is related to an infection in maxillofacial pathology. Through the angular vein, venous blood can be drained from the facial vein to the superior ophthalmic vein and then to the cavernous sinus. (2

The diagnosis of facial thrombophlebitis is essentially clinical. It combines pain, local heat, induration, hypoesthesia and erythema on the venous path that is palpable as an "indurated cord" (1). The inflammatory reaction persists from 2 to 3 weeks with fever. (3-4)

Facial thrombophlebitis is a result of edema of the nasojugal fold diffusing at the internal angle of the eye. The palpation finds an indurated cord and the evolution starts towards the development of a tumefaction of the internal canthus. An attack of the canine (named "tooth of the eye or tooth of Hippocrates") is sometimes found. (1) Facial thrombophlebitis is associated with edema of the upper eyelid, serous chemosis and exophthalmos. (1) The mandible is often as concerned as the maxillary. On the other hand, if all the maxillary teeth can be incriminated (especially the anterior teeth), only the molars, and still more the wisdom teeth, can be at the origin of such venous thrombosis. The tooth is then the starting point of cellulite diffusing to neighboring cellular spaces (2) Preventative treatment relies on rigorous disinfection of any facial wound. There are no randomizedstudies to inform the management of facial thrombohlebitis. Recommendations are made based on case reports and limited data fromobservationalstudies. The major components of management are antibiotictherapy and eradication of the primary infection site. Appropriateantimicrobialregimensmayincludehigh dose of penicillin plus metronidazole or the addition of formulations containingclavulanate or sulbactam. Monotherapywithclindamycinisalsoappropriate (1, 8).

The duration of antibiotictherapytypically ranges from 2 to 6 weeksadministeredintravenously for the first couple of weeksfollowed by conversion to orallyequivalent agents (9).

The role of anticoagulation iscontroversialsincethere are no prospective randomizedcontrolled trials addressing the value of anticoagulation in treatment.

Opponents of anticoagulation argue that :

• Risk of bleeding complications

• Brakingrole of the thrombus on the extension of infectiousthrombophlebitis.

Proponentssuggestthat concomitant anticoagulation therapymayexpediterecovery and hasten the resolution of septicemboli and reserved for deep and aggraveted cases (10).

III. Conclusion

Facial thrombophlebitis is rare and complicates an infectious maxillofacial pathology. The facial vein is mostly the site of the thrombosis, it can be complicated by thrombosis of the cavernous sinus. Its treatment combines antibiotic therapy and heparin therapy.

Bibliography

[1]. Dagain A, Thiéry G, Dulou R, Delmas j.-M, Pernot P. Thrombophlébitescraniofaciales. EMC (Elsevier Masson SAS Paris), Stomatologie, 22-043-A-10, 2007, Médecine buccale, 28-300-C-10, 2008

[2]. Cantaloube D, Richard L, Flocard F. Thrombose veineuse faciale et cérébrale d'origine maxillo-faciale. EMC (Elsevier SAS, Paris), Stomatologie, 22-043-A-10, 1994

[3]. Cadenat H, Barthelemy R, Fabie M, Joniot B. Thrombophlebitis of the facial vein. RevOdontostomatol Midi Fr 1968 ; 26 :200-4

[4]. Stukaleno AA Atypycal course of thromosis of the sigmoid sinus, common facial and jugular veins. VestnOtorinolaringol 1968 ; 30 :100-1

[5]. Bousser MG, Barnett HJ. Cerebrzl venous thrombosis. In : Mohr JP, Choi DW, Grotta JC, Weir B, Wolf PA, editors. Stroke-pathophysiologydiagnosis and management. Philadelphia : Churchill Livingstone ; 2004. P. 301-25

[6]. Itrat A, Shoukat S, Kamal AK. Pathophysiology of cerebral venous thrombosis- an overview. J Pak Med Assoc 2006 ; 56 : 506-8

[7]. Kojan S, Al-Jumah M. infection related cerebral venous thrombosis. J Pack Med Assoc 2006 ; 56 : 494-7

[8]. K. Bhalia, N.S. JonesSepticcavernous sinus thrombosissecondary to sinusitis: are anticoagulants indicated?. A review of the literature J LaryngolOtol, 116(2002), pp. 667-676

[9]. Franklin Lizé, Benjamin Verillaud, Pierre Vironneau, SepticCavernous Sinus ThrombosisSecondary to Acute BacterialSinusitis: A RetrospectiveStudy of Seven Cases American Journal of Rhinology and Allergy vol 29, issue 1 : e7-e12

[10]. B. Imholz, M.Becker, T.LombardSepticthrombosis of the cavernous sinus secondary to a streptococcus milleri oral infection.

[11]. DentoMaxilloFacial.Radiology 2012 sep ; 41 (6) : 525-528

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