HISTOPATHOLOGICAL ASPECTS OF ORAL FOCAL DISEASE WITH INVOLVEMENT IN ANTERIOR UVEITIS PATHOLOGY

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Abstract: *Even since 1900, the term "focal infection" has been associated with some diverse pathological manifestations involving the entire body or some organs, originating in a chronic infection. Since the last century, it was shown that approximately 93% of active focal diseases are localized at teeth level. Their anatomical conformation creates excellent conditions for chronic infections caused by the fact that both, the enamel and the dentin do not have defence mechanisms, thus being impossible to obtain tissue or humoral defence elements.*

INTRODUCTION

Currently, for the detection of focal infections, teeth and tonsils are firstly examined, and only after, the other organs.(1) The starting point of developing oral focal diseases is the dental pulp. Odontal focal diseases are located in the endodontic cavity (pulp chamber, root canals), while the periodontal diseases develop in the marginal or apical periodontium.(2)

The cause of this infection is polymicrobial flora confinement at sterile tissues level, the result being the local inflammation progressing to an abscess formation.(3,4)

Most of the focal diseases have a medium intensity, respond well to the topical treatment associated with the surgical one and the appropriate antibiotic therapy.(5-8)

Radicular granuloma is examined taking into account the hematoxylin-eosin staining.(9) It is the most frequent form of chronic periodontitis (chronic apical granulomatous periodontitis), being characterized by the formation of a non-specific granulation tissue around the apex.(10,11) The lesion appears as a complication of a pulp, but favoured by toxic and mechanical factors. In the course of evolution, it produces progressive osteolysis of the alveolar bone, being considered a source of focal infection.

PURPOSE

The present study is a retrospective one, including 172 patients over a period of time between 2008 and 2014. The study included the patients hospitalized in the Ophthalmology Department within the County Clinical Emergency Hospital of Sibiu, with a diagnosis of anterior uveitis.

The study also aimed at the causal relation with a focal dental infection, as well as at the histopathological analysis of the biological product resulted from the applied treatment.

MATERIALS AND METHODS

There were investigated patients hospitalized in the Ophthalmology Department within the County Clinical Emergency Hospital of Sibiu, taking into account the origin environment, gender, ocular symptoms of anterior uveitis present.

The patients were ophthalmologically investigated and they were simultaneously submitted to a dental examination, aiming at detecting the presence of one or more oral infections. Following the applied dental treatment (tooth extraction), the biological product was histopathologically analyzed, aiming at the confirmation of a dental focal disease. There was also followed the evolution of the ophthalmologic symptoms under the dental treatment.

RESULTS

In terms of status and origin environment, there is an association between the patient's condition and the environment of origin (p = 0.070), but we can see that the disease is in an acute stage in the rural patients (table no. 1).

Table no. 1. Correlations between disease onset and origin environment

Origin environment	Stage		TOTAL	p Likelihood ratio
	Acute	Chronic		
Rural	5	3	8	0,070
	62.5%	37.5%	100.0%	
Urban		2	2	
		100.0%	100.0%	
TOTAL	5	5	10	
	50.0%	50.0%	100.0%	

Also, we cannot say that there is an association between the patient's condition and gender (p = 0.487), but we can see that in the male patients, the number is equal (57.1% / 42.9%) (table no. 2).

Table no. 2. Correlation between disease onset and gender of the patients

Gender	Stage		TOTAL	p Likelihood ratio
	Acute	Chronic		
Female	1	2	3	0,487
	33.3%	66.7%	100.0%	
Male	4	3	7	
	57.1%	42.9%	100.0%	
TOTAL	5	5	10	
	50.0%	50.0%	100.0%	

It was found that out of a total number of 172 patients studied, 58 had performed dental examination and in 20 patients,

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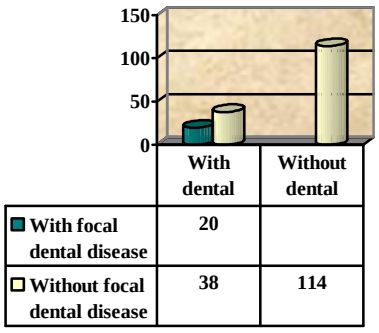
there was found a focal dental disease that required appropriate therapy (figure no. 1).

Figure no. 1. Percentage of the patients with focal dental diseases



	With dental	Without dental
With focal dental disease	20	
Without focal dental disease	38	114

Upon the macroscopic examination, there can be detected a nodular formation all around the apex, with reddish appearance, soft consistency, well-delimitated.

Microscopically speaking, there is described a nodular formation, composed of lax connective tissue, which contains blood capillaries and numerous cells: lymphocytes, plasma cells, histiocytes, fibroblasts, granulocytes. Large round cells appear with clear, foamy cytoplasm, small nucleus, hyperchromic (figures no. 2,3). Outside the formation, there can be detected a more dense connective tissue, forming a fibrous capsule.

Figure no. 2. Microscopic appearance of the dental granuloma

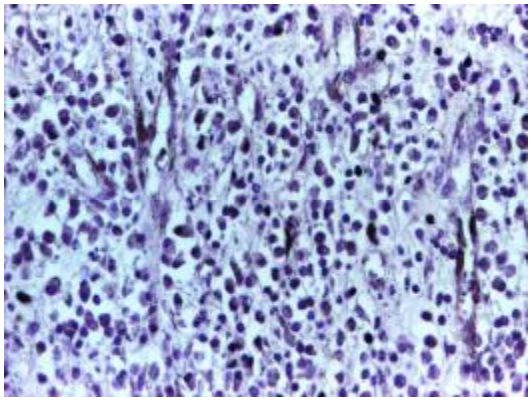
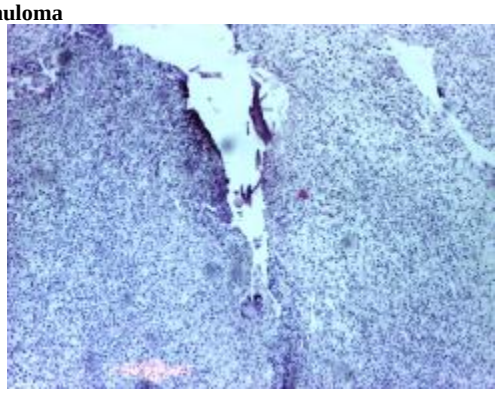


Figure no. 3. Microscopic appearance of the dental granuloma



CONCLUSIONS

The histopathological examination of the biological material resulting from tooth extraction certifies the inflammatory nature of the initial lesion, providing important data on choosing the appropriate treatment options, both for the treatment of the focal dental disease and for the associated uveitis.

Appropriate therapy includes pain relievers, dental or surgical interventions at the level of the primary lesion, antibiotic therapy combination. In fact, there are few data on the ambulatory treatment of these patients. Most studies include hospitalized patients who required surgical therapy in oral-maxillofacial field. It is well known that only administration of antibiotics is not sufficient, most of the times local treatment association is required.

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