CLINICAL AND DEMOGRAPHIC INITIAL ASPECTS OF PATIENTS WITH ANTERIOR UVEITIS. CLINICAL AND STATISTICAL STUDY

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Abstract: *This study is a retrospective one and, starting from the assumption that one of the mechanisms involved in the pathology of uveitis is an infection, we aimed at establishing a causal relation between uveitis and the presence of dental focal diseases in a group of patients who were hospitalized in the Ophthalmology ward within Sibiu County Clinical Emergency Hospital, where they were examined and treated for symptoms of anterior uveitis.*

INTRODUCTION

Classification and standardization of uveitis is very important, and it is the result of more research centers, quantifying the symptoms and the clinical signs making up the clinical picture, as well as the evolution and the response to the administered treatment.(1,2) The most commonly used classification is the one developed by the International Uveitis Study Group (IUSG), which is based on the anatomical location of inflammation.(3) Panuveitis is also described, which is a term used to describe the location of the inflammation at several structures: the anterior chamber, vitreous, retina, choroid.(3)

In 2008, the International Uveitis Study Group has developed a simplified clinical system of classification of uveitis on the basis of etiological criteria. Therefore, there are three main categories as follows: infectious (e.g., bacterial, viral, fungal, parasitic), infectious (e.g., associated known or unknown systemic diseases), hidden (for example, neoplastic, non-neoplastic).(4) One of the mechanisms incriminated in triggering the inflammatory process is most likely the infectious uveitis.

PURPOSE

This paper aims at establishing a causal relation between uveitis and the presence of dental focal diseases in a group of patients who were hospitalized in the Ophthalmology ward within Sibiu County Clinical Emergency Hospital, where they were examined and treated for symptoms of anterior uveitis.

MATERIALS AND METHODS

The present study is retrospective, covering the period from 2008 to 2014. There were entered into the study the patients hospitalized in the Ophthalmology ward within the County Clinical Emergency Hospital of Sibiu, with previous diagnosis of uveitis.

There were taken into account many parameters, aiming at the causality relation with the presence of a focal dental disease (confirmed by the histopathological analysis of the biological product resulting after extraction).

RESULTS AND DISCUSSIONS

In this study, there were quantified the demographic parameters, the clinical issues, laboratory analyses, the presence or not of a focal dental disease and the treatment performed.

There were examined the patients admitted in the Ophthalmology ward within the County Clinical Emergency Hospital of Sibiu, between 2008 and 20014, aiming at examining them from the ophthalmologic and dental point of view.

There was identified the presence of one or more dental infectious by histopathologically analyzing the biological product resulting after the dental treatment applied obtaining thus, the confirmation of the dental focal disease.

As shown in the study, there were a total of 172 patients with a diagnosis of anterior uveitis, hospitalized in the Ophthalmology ward within the County Clinical Emergency Hospital of Sibiu, for a period of time between 2008 and 2014 (table no.1). From the point of view of the number of the studied cases per year, there can be noticed an approximate proportion at year level. The examined patients came from different origin environments, both urban and rural areas, the data showing a predominance of those coming from urban areas.

Table no. 1. Distribution of the study group per years

Year	Urban			Rural			TOTAL		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
2008	5	5	10	7	9	16	12	14	26
2009	11	8	19	4	4	8	15	12	27
2010	7	13	20	5	0	5	12	13	25
2011	5	12	17	6	4	10	11	16	27
2012	14	6	20	5	6	11	19	12	31
2013	4	5	9	7	4	11	11	9	20
2014	4	6	10	4	2	6	8	8	16
Total	50	55	105	38	29	67	88	84	172

In terms of annual predominance, there is a maximum level registered in 2012, with a minimum incidence in 2014 (figure no. 1).

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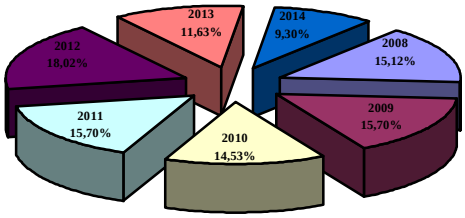
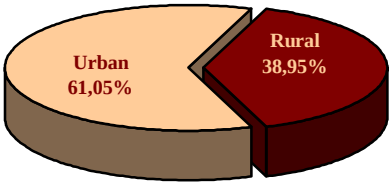
Figure no. 1. Distribution of the study group per years



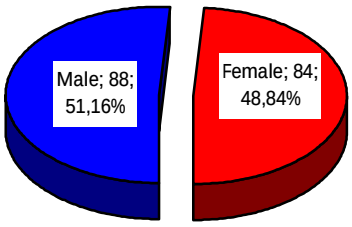
The area of origin is a relative factor in the etiology of anterior uveitis, most of the study patients coming from urban area (figure no. 2).

Figure no. 2. Patients' distribution according to origin environment



Regarding the patients' distribution per gender, it was found that the pathology is more frequently encountered in males (51.16%), compared to a lower number recorded in females (48.84%), but with a trend of slight predominance in urban area in females and inversely in male patients in rural area (figure no. 3).

Figure no. 3. Distribution of the study patients per gender



In terms of distribution per year and area of origin, we can say with an accuracy of 95% (p = 0.045) that there is an association between the year and the area of origin, so that in 2008, the pathology studied was prevalent in rural areas (61.5%) compared with 2010, while in urban areas there were 80% of cases (table no. 2).

Table no. 2. Distribution of the study group per year and area of origin

Year	AREA		Total	p Likelihood ratio
	RURAL	URBAN		
2008	16	10	26	0.045*
	61.5%	38.5%	100.0%	
2009	8	19	27	
	29.6%	70.4%	100.0%	
2010	5	20	25	
	20.0%	80.0%	100.0%	
2011	10	17	27	
	37.0%	63.0%	100.0%	
2012	11	20	31	
	35.5%	64.5%	100.0%	
2013	11	9	20	
	55.0%	45.0%	100.0%	
2014	6	10	16	
	37.5%	62.5%	100.0%	
Total	67	105	172	
	38.95%	61.05%	100.0%	

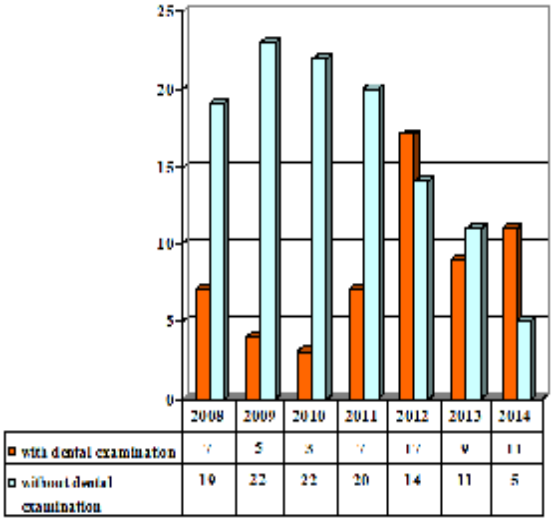
Since a focal dental disease may have a causal relation with the pathogenesis of anterior uveitis, in the study group, we aimed at performing this examination and the associated pathology.

Thus, it can be said with an accuracy of 99% (p = 0.000) (table no. 3), that there is an association between dental examinations and the year, so in the first 2 years (2008 and 2009), 36.3% of those who did not perform any dental examination, compared to the past two years were predominant from rural areas (61.5%) compared to 16% in the last two years, (2013 and 2014) of those who had dental examination (figure no. 4).

Table no. 3. Preponderance of dental examination in the study group

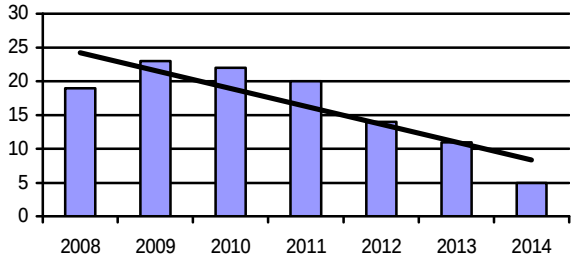
YEAR	Dental examination		Total	p
	yes	no		
2008	7	19	26	0,000**
	11.9%	16.8%	15.1%	
2009	5	22	27	
	8,5%	19.5%	15.7%	
2010	3	22	25	
	5.1%	19.5%	14.5%	
2011	7	20	27	
	11.9%	17.7%	15.7%	
2012	17	14	31	
	28.8%	12.4%	18.0%	
2013	9	11	20	
	15.3%	9.7%	11.6%	
2014	11	5	16	
	18.6%	4.4%	9.3%	
Total	59	113	172	

Figure no. 4. Distribution per years of the patients who had dental examination



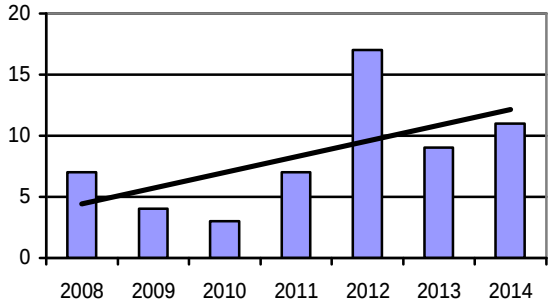
The data obtained after conducting the study reveal a decrease in the number of patients who were not examined in terms of dental focal disease during the studied period of time (figure no. 5).

Figure no. 5. Distribution of the study group without dental examination, per years



We also noticed a clear preponderance of detailed dental examination of (aiming at the detection of a focal dental disease), especially in the last years of the period covering the study (figure no. 6).

Figure no. 6. Distribution of the patients who had dental examination, per years



In terms of onset, one cannot say that there is an association between the type of onset and the dental examination carried out (p = 0.070) (table no. 4).

Table no. 4. Distribution of the number of dental examinations according to onset

Onset	Dental examination		Total	p Likelihood ratio
	yes	no		
acute	52	108	160	0,070
	88.14%	95.76%	93.02%	
insidious	7	5	12	
	11.86%	4.24%	6.98%	
Total	59	113	172	

Of the total patients examined during the entire period, 2008-2014, in 59 of them dental examination was performed. Upon the dental exam performed, there were identified focal dental diseases in 22 patients, as demonstrated by the data presented in the table below (table no. 5).

Table no. 5. Frequency of the patients with dental examination and the presence of focal dental disease

Presence of focal disease	Dental examination		Total	p Likelihood ratio
	yes	no		
yes	22		22	0,000**
	100.0%		100.0%	
no	37	113	150	
	24.67%	75.33%	100.0%	
Total	59	113	172	
	34.3%	65.7%	100.0%	

CONCLUSIONS

Infectious theory underlying the onset of uveal inflammatory process is based on the presence of a focal disease localized in 90% of cases at the cephalic end, of which 72% are odonto-periodontal infectious diseases.(5)

Odontal focal diseases start in the dental pulp, being located at the level of endodontic cavities and those paradontal, have as starting point the apical or marginal parodontium.(6)

The cause of these infections is the confinement of poly-microbial flora at the level of sterile tissue, the result being the local inflammation evolving until the formation of granuloma (7,8), from where the dissemination, both by blood and by nervous or digestive systems, of microbial toxins, toxic compounds resulting from the septic tissue degradation, will result in a wide array of dysfunctions and lesions.

Appropriate therapy includes pain relievers, dental or surgical interventions at the level of the primary lesion and antibiotic combination.

In fact, there are few data on the treatment of these patients in ambulatory.

Single administration of antibiotics is not sufficient, most of the times, the association of a local treatment being required.

REFERENCES

1. Jabs DA, Nussenblatt RB, Rosenbaum JT. Standardization of Uveitis Nomenclature (SUN) Working Group. Standardization of uveitis nomenclature for reporting clinical data. Results of the First International Workshop. Am J Ophthalmol. Sept 2005;140:509-16.
2. McCannel CA, Holland GN, Helm CJ, Cornell PJ, Winston JV, Rimmer TG. Causes of uveitis in the general practice of ophthalmology. UCLA Community-Based Uveitis Study Group.Am J Ophthalmol. 1996 Jan. 121(1):35-46.
3. Saadia ZF, Hampton RS. Uveitis classification, Updated; 2014.
4. Deschenes J, Murray PI, Rao NA, et al. International Uveitis Study Group (IUSG): clinical classification of uveitis. M Ocular Immunology and Inflammation. Jan-Feb 2008;16:1-2.
5. Cachovan G, Phark JH, Schön G, Pohlenz P, Platzer U. Odontogenic infections: An 8-year epidemiologic analysis in a dental emergency outpatient care unit. Acta Odontol Scand. May-Jul 2013;71(3-4):518-24.
6. Venkataraman BK. Diagnostic Oral Medicine. Lippincott Williams & Wilkins; 2013.
7. Kerr DA. Granuloma pyogenicum. Oral Surg Oral Med Oral Pathol. 1951;4:158-176.
8. Dahlen G. Microbiology and treatment of dental abscesses and periodontal-endodontic lesions. Periodontology 2000. 2002;28:(1)206-239.