CAUSES OF UVEITIS IN THE PRACTICE OF OPHTHALMOLOGY

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Abstract: The purpose of this article is to outline the interaction between ophthalmologists and infection disease doctors in the management of uveitis. Material and methods: All uveitis case series were registered in the Ophthalmology Clinic of the city of Târgu Mureş over a period of 10 years. We examined 792 consecutive cases of general uveitis, all of them being hospitalized. Using measurement indicators, we found more cases in the cold season, male predominant, with no significant differences regarding the origin environment. The distribution of general uveitis cases by the anatomical site of the disease was significantly different. Conclusions: Uveitis may be the first presentation of a wide variety of underlying ocular and systemic diseases. It is important for the ophthalmologist to make a specific diagnosis.

Keywords: uveitis, ophthalmology, cases

Rezumat: Scopul articolului este de evidențiere a interacțiunii dintre oftalmolog și medicul infecționist în managementul uveitelor. Material și metodă: întreaga serie de cazuri provine de la Clinica de Oftalmologie din Târgu Mureș din 10 ani. Am examinat 792 de cazuri consecutive de uveite generale, toate internate. Folosind indicatori de măsură am găsit în sezonul rece mai multe cazuri, o predominanță la sexul masculin, fără diferențe semnificative pe mediile de proveniență. Concluzii: uveitele pot fi prima prezentare a unei varietăți de boli oculare și sistemice. Este important pentru oftamolog să facă un diagnostic specific.

Cuvinte cheie: uveite, oftalmologie, caz

INTRODUCTION

Uveitis is an inflammation of the uveal tract: the iris, ciliary body and choroid. Most cases are idiopathic, but identifiable causes include trauma, various infections and systemic diseases, many of which are autoimmune. Defined as an intraocular inflammation, uveitis may be related to a systemic disease or represent an isolated entity. Screening for associated extra-ocular manifestations is mandatory in uveitis patients.

Symptoms include decreased vision, ocular ache, redness, photophobia, and floaters. While intraocular inflammation is detected clinically, identifying the cause of the inflammation requires testing.(3)

Anterior uveitis is localized primarily to the anterior segment of the eye and includes iritis

(inflammation in the anterior chamber and of the anterior vitreous) and iridocyclitis (inflammation of the anterior chamber and anterior vitreous). Intermediate uveitis (peripheral uveitis or chronic cyclitis) occurs in the vitreous. Posterior uveitis refers to any form of retinitis, choroiditis, or inflammation of the optic disk. Panuveitis (also called diffuse uveitis) implies an inflammation, both in the anterior and posterior chambers.

A number of infectious diseases cause uveitis. (Table 1)(2)

Infectious Causes of Uveitis				
Frequency	Viruses or Infections			
More Common	Cytomegalovirus			
	Herpes simplex virus			
	Pneumocystis jiroveci			
	Toxoplasmosis			
	Varicella-zoster virus			
Less Common	Histoplasmosis			
	Lyme disease			
	Syphilis			
	Toxocariasis			
	Tuberculosis			
Rare	Aspergillus			
	Candida			
	Coccidioidomycosis			
	Cryptococcus			
	Cysticercosis			
	Leprosy			
	Leptospirosis			
	Onchocerciasis			
	Tropheryma whippelii			

Table no. 1. Infectious etiology of uveitis

PURPOSE OF THE STUDY

The purpose of this article is to outline the interaction between ophthalmologists and infection disease doctors in the management of uveitis. Two issues will be addressed:

1) what strategies should the infection disease doctor follow when asked to investigate a case of uveitis; and

2) in which systemic diseases, the ocular examination is required to rule out intraocular inflammation.

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MATERIAL AND METHODS

All uveitis case series were registered in the Ophthalmology Clinic of the city of Târgu Mureş over a period of 10 years, between 1998 and 2007. We analysed the information about the types of uveitis encountered in the general practice of ophthalmology. We prospectively examined 792 consecutive cases of general uveitis, seen by all ophthalmologists upon hospitalization. All cases were categorized by the anatomical site of inflammation and disease course, and, if possible, they were assigned a specific diagnosis. Cases of toxoplasmosis seen during the same intervals were recorded separately.

Uveitis has been assessed under four major patterns of presentation: anterior uveitis, intermediate uveitis, posterior uveitis, and panuveitis-with subclasses within each of these four groups. We have outlined both the investigations which facilitate diagnosis of the possible underlying causes of inflammation and the interpretation of the results of such investigations. We used statistics derived indicatory as relative measures of structure and coordination. Their dynamics was followed in percentage and numbers.

RESULTS: We present in tables and figures the most significant statistical results.

	NO. OF CASES	YEA	R	SYMBOL	
	63	1998		1	
	65	1999		2	
	101	2000		3	
	91	2001		4	
	95	2002		5	
	111	2003		6	
	80	2004		7	
	93	2005		8	
	41	2006		9	
	52	2007		10	
total			792		
HOS	PITALIZATION		RE-HO	SPITALIZATI	ON
731			61		

Picture no. 1. Years repartition of total uveitis. 10 years from 1= 1998 to 10= 2007. Percentage results.



Sexual predilection was found, almost double affecting the males, 62%, while women represented 38%.

There was no significant difference between the rural and urban social environment of the patients.

The majority of cases were hospitalized in January, 97 patients, meaning 12,25% of all cases and 1,26 of the second number, 77, hospitalized in June and November. The cold season was considered the months I, II, XI, XII, where we found 284 cases, while the hot season included the months V, VI, VII, VIII and comprised 267 cases. By the use of measurement indicators, we found 1,06 more cases in the cold period than in summer time.

Picture no. 2.	Distribution	per	gender
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Picture no. 3. Distribution per environment











Associated factors (e.g. unilateral versus bilateral, acute versus chronic, exudative etc.) are also

assessed. Based on this information, the types of uveitis will be named (e.g. acute, unilateral, anterior uveitis) and matched to a potential list of etiologies (e.g. viral hypertension, microbial, associated diagnosis).

Table no. 3. Distribution of uveitis type

Main diagnosis	No. of cases
KERATOUVEITIS	113
NEURORETINITIS TOXOPLASMA	9
PANUVEITIS	30
ACUTE ANTERIOR UVEITIS	7
ACUTE UVEITIS AC	178
ANTERIOR UVEITIS	56
UVEITIS NESP.	141
CHRONIC UVEITIS	51
EXOGEN UVEITIS	3
EXUDATIVE UVEITIS	23
HERPETIC UVEITIS	4
HYPERTENSION UVEITIS	16
INTERMEDIATE UVEITIS	2
POSTERIOR UVEITIS	27
RECURRENT UVEITIS	100
SUBACUTE UVEITIS	26
ZOOSTER UVEITIS	6

The distribution of general uveitis cases taking into account the anatomical site of the disease was significantly different between the community-based practices (anterior 72%; intermediate 1%; posterior 15%; panuveitis 12%).

DISCUSSIONS

The modern approach in the diagnosis of uveitis is based on the naming-meshing system popularized by Smith and Nozik.(7) After a short history (ocular complaints, general health) an ophthalmic examination is carried out to determine the anatomic structures involved. Targeted questioning and selected medical and laboratory investigations based on the shortlist will then identify a possible cause for a particular patient's uveitis. In other words, the ophthalmologist should never ask the infection disease doctor to run the full battery of tests in a patient with uveitis. He should rather indicate which type of uveitis is present and what are the most likely diagnoses to be excluded.(8) Many systemic diseases cause diffuse inflammation and are associated with uveitis.

Most posterior uveitis (retinitis) is idiopathic. The most commonly recognized cause of posterior uveitis in immunocompetent patients is toxoplasmosis, whereas the most commonly recognized cause in patients with HIV/AIDS is cytomegalovirus (CMV).

The most commonly identified cause of panuveitis is sarcoidosis,(4) but most cases remain idiopathic despite appropriate testing

CONCLUSIONS

Uveitis may be the first presentation of a wide variety of underlying ocular and systemic diseases. It is

important for the ophthalmologist to make a specific diagnosis in order to instigate specific therapy and give an accurate prognosis. The ability to recognise the clinical patterns of uveitis and to initiate appropriate investigations should form the basis of the ophthalmologist's management of the condition.

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