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## THE PATHOLOGY OF THE EYELID AT THE UNIVERSITY HOSPITAL OF BRAZZAVILLE

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### ABSTRACT

**Background:** The eyelids have two essential roles, protecting the eye from external attacks and ensure the drainage of tears through the nasolacrimal passages they shelter. Eyelids may be the site of many diseases.

**Objective:** To determine the main pathologies of eyelid in University Hospital of Brazzaville.

**Design:** Cross-sectional study.

**Subjects:** Records of patients seen for a disease of the eyelids.

**Results:** One hundred and twelve cases were studied. The pathologies found were: Trauma (40.18%), Infections (22.32%), Tumours (17.87%), Paralysis of III nerve (7.14%), Paralysis of VII nerve (6.25%), Myasthenia gravis (2.67%), Steinert myopathy (2.67%), Cryptophthalmos due to Fraser's syndrome (0.90%). Domestic violence topped trauma (31 patients / 45). Infections were dominated by ophthalmic Zona (18 patients / 25) and two rare diseases, one case of North American blastomycosis and one case of post surgical eyelid gangrene. Basal cell carcinoma was the first cancer (11 patients / 20).

**Conclusion:** The pathologies of eyelid is rich and varied. In Brazzaville it is dominated by trauma and infections.

### INTRODUCTION

The eyelids are two mobile musculo-membranous veils that cover and protect the front of the eyeball. They also provide drainage of tears through the nasolacrimal nasal passages they shelter. They are separated by a gap (eye opening) which measures an average of 30 mm long and 10 mm high. On their free edges are implanted lashes in three or four rows. Near the inner canthal angle are the puncta. The free edges also comprise the orifices of excretion glands, Zeis, Moll', and meibomian (1, 2).

The eyelids are operated by muscles that allow the opening and closing. The orbicular muscle is used to occlusion. The levator muscle of the upper eyelid and the Müller's muscle ensure openness. The Müller's muscle is a smooth muscle which extends from the lower surface of the levator muscle of the upper lid to the upper edge of the upper tarsus (3).

All these structures that form the eyelid may be the site of a benign or serious disease that involves

the visual and / or vital prognosis (4).

This survey aimed to list the major diseases of eyelid encountered at the University Hospital of Brazzaville.

### MATERIALS AND METHODS

Cross-sectional study over a period of 8 years, between January 2008 and December 2015. It was conducted in the Ophthalmology department of the University Hospital of Brazzaville. It was based on records of patients seen for a disease of the eyelids whatever the age. Were excluded from this survey:

- Allergic blepharitis,
- Blepharitis iatrogenic,
- Benign tumors,
- Disorders of eyelid static age-related: ectropion, entropion

The diagnosis of cancer and the North American blastomycosis were made on the basis of pathological

examination. The diagnosis of Steinert's myopathy and Fraser's syndrome had been made on the basis of clinical features.

The information was collected using an Excel sheet. The arithmetic mean and its standard deviation were the only statistical tests used.

## RESULTS

One hundred and twelve cases were identified. The

average age was  $43 \pm 4.3$  years [4 months - 78 years]. The pathologies found are shown in Table 1.

The North American blastomycosis or Gilchrist's disease was diagnosed in an HIV patient as a necrotizing nodule of eyelid (Figure 1). The gangrene of eyelid had complicated the surgery of chalazion (Figure 2). The cryptophthalmos was party of Fraser's syndrome in a child aged 9 months (Figure 3).

**Table 1**

*Pathologies of the eyelid encountered in Ophthalmology department of University Hospital Brazzaville between January 2008 and December 2015*

Pathology	Nature of the disease	Effective	Frequency %
Trauma	Beaten	31	40.18
	Public road accident	9	
	Thermal burn	5	
Infection	Ophthalmic zoster	18	22.32
	Stye	4	
	Abcess	1	
	Gilchrist's disease	1	
	Gangrene	1	
Tumors	Basal Cell carcinoma	11	17.87
	Sebaceous carcinoma	5	
	Squamous cell carcinoma	4	
Neurology	Paralysis of III	8	13.39
	Paralysis of VII	7	
Neuromuscular	Myasthenia	3	2.67
Muscular	Steinert's Myopathy	3	2.67
Congenital	Cryptophthalmos (Fraser's Syndrome)	1	0.90
TOTAL		112	100

**Figure 1**

*Nodule of the eyelid due to a North American blastomycosis in a context of HIV / AIDS*



**Figure 2**

*Gangrene of the eyelid after the surgery of Chalazion*



**Figure 3**

*Cryptophthalmos associated with surgical scars of cleft lip and palate as part of a Fraser's syndrome*



## DISCUSSION

Injuries were the leading cause of the pathology of the eyelid. Battered come at the top of these traumatic causes. The genre was not the subject of this investigation. However it is recognized that these are often due to domestic violence. Most often the man assault his wife with serious consequences sometimes leads to death (5-8). The domestic violences are a real problem in the world. This violence affects all socio-cultural categories and religious. The problem is often hidden in Africa because of cultural constraints (5-9). Infections had constituted the second cause of eyelid diseases. The ophthalmic zoster was the first infection observed. The advent of AIDS has dramatically modified the expression of some pathogens. Depression of the immune system due to HIV / AIDS promotes some diseases that are usually encountered in the elderly (over 65). The zoster infection whatever its location is one of the first opportunistic infections in the HIV / AIDS (10, 11). The infectious disease was also marked by two rare diseases North American blastomycosis and gangrene.

North American blastomycosis or Gilchrist's disease was diagnosed in an HIV positive patient. It is a fungus endemic in Great Lakes regions in North America. It is rare in black Africa but some cases are described especially in the context of immunosuppression (12, 13).

Gangrene had occurred after surgery for chalazion in an immunocompetent patient. No logical physiopathologique explanation had been found. The chalazion surgery is rarely the cause of so serious complication. We have found that two exceptional complications described in the literature, one case of orbital hemorrhage and one case of orbital apex syndrome (14, 15).

Basal cell carcinoma is by far the first eyelid cancer. The main risk factor is exposure to ultraviolet radiation from the sun. Most often it is an ulceration, more or less rounded with a fall of eyelashes,

variable in size, sometimes a little pigmented, with a highly vascular center. This lesion usually sits at the canthal angle internal. This tumor only rarely gives metastases, but its locoregional extensions can be mutilating and very devastating. In localized and circumscribed forms a wide resection with pathologically healthy surgical edges may suffice as treatment (16-18).

Paralysis of the nerves III and VII were the fourth pathology of eyelid. Paralysis of III were vascular (aneurysm of the internal carotid), metabolic (diabetes) and infectious (zoster infection). Paralysis of VII were essentially idiopathic. These data are consistent with the literature (11, 19-21).

Two rare diseases were causing disturbances of static eyelid (ptosis), Steiner's myopathy and myasthenia gravis. The cryptophthalmos due to Fraser's syndrome was the only congenital pathology diagnosed.

In conclusion, Brazzaville the pathology of the eyelid is rich and varied. These main causes are trauma, infections and tumors.

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