

## Demographic Distribution of Oculoplastic Disorders in Port Harcourt Nigeria

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### Authors' contributions

This work was carried out in collaboration among all authors. Author CSE designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author NEC managed the literature searches. Author BT managed the analyses of the study. All authors read and approved the final manuscript.

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### ABSTRACT

**Aim:** To find the age and gender variation in oculoplastic-related disorders in Port Harcourt.

**Methods:** This study was a hospital-based retrospective study involving retrieval of records of all oculoplastic disorders University of Port Harcourt Teaching Hospital (UPTH), Nigeria. The various ocular disorders in the hospital are routinely entered into an Ophthalmology register from where the data were extracted. Data analysis was performed using United States Centers for Disease Control and Prevention (CDC) Epi-Info version 7 software.

**Results:** The commonest case was Chalazion (32%) followed by Ocular Surface Squamous Neoplasia (8.9%), Thyroid Eye Disease, Nasolacrimal Duct Obstruction both contributing 5.7% each. There were 49 (39.8%) males and 74 (60.2%) females. The male to female ratio was 2:3. The commonest affected age group was 21-30 years (33.3%), followed by 31-40 years (15.5%). The least affected age group were those that were above 70 years which constituted 2.4%.

**Conclusion:** Female gender and the age group of 21-30 were seen more with oculoplastic conditions probably due to the more sensitivity of females and also of these young adults to cosmetic blemishes posed oculoplastic related cases.

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**Keywords:** Demography; oculoplastic disorders; Port Harcourt.

## 1. INTRODUCTION

Orbito-oculoplastic diseases present as orbital, ocular, lacrimal, lid and adnexal lesions. They may arise from congenital anomalies, involutional changes, trauma, metabolic diseases and tumors [1]. The resulting visual dysfunction, anatomical disfigurement and cosmetically unacceptable appearance predispose to psychosocio-economic isolation and educational deprivation [1].

Several oculoplastic related studies have been carried out with varying results as it relates to age distribution. In a study by Anunobi et al, the commonest age group was that of children under 15 years with a frequency of 40.6% [2]. In a similar study by Bekibele et al in Ibadan Nigeria, 50% of cases were children and young adults from 0 to 20 years old [3]. However in a study in Pakistan, Asad Aslam Khan et al. observed a predominance of adults with 57.47% of cases [4] while Balogun et al had two peak age groups of 0-9 years (22.7%) and 20-29 years (19.3%) [1].

There has also been varying results on gender distribution in oculoplastic cases. There was male predominance in a study by Assavedo et al with males constituting 60.8% of study population [5]. This was similar to the findings by Kaya et al. [6] who had 60.4% of male subjects. Anunobi et al. [2] in Nigeria also reported a male predominance in 56.0% of cases. Balogun et al found a female predominance in their study in Lagos Nigeria [1].

## 2. METHODOLOGY

This study was a hospital-based retrospective study involving retrieval of records of all oculoplastic disorders seen in University of Port Harcourt Teaching Hospital, Port Harcourt Nigeria over a one year period (January-December 2018). The various ocular surgeries performed in the hospital are routinely entered into an Ophthalmology register. Data were extracted from the ocular surgery register and inputted into an excel-spread sheet. Double check was employed to avoid errors in data entry. Data analysis was performed using United States Centers for Disease Control and Prevention (CDC) Epi-Info version 7 software.

## 3. RESULTS

The distribution of Oculoplastic disorders of the table above showed that about 32.0% of

Oculoplastic disorders was Chalazion while about 8.9% was Ocular Surface Squamous, Thyroid Eye Disease, Nasolacrimal Duct Obstruction and Ectropion are about 5.7%. Cyst of Moll, Plexiform Neurofibroma Tosis and Demoid Cyst are 4.8%, 4.6% and 4.1% respectively. Proptosis, Orbital Malignancy, Empty Sucket and Ptosis are 3.2%, 3.2%, 2.4% and 2.4% respectively. Individually, Cyst of Zeis, Trichiasis, Lid Deformity and Conjunctival Mass, Simple Pharon and Ankloblepharon account were 1.6% of Oculoplastic Disorders. Lastly, Dry eye secondary to facial Nerve Palsy, Lacrimal Gland Tumour, Implantation Cyst, Lid Deformity, Chronic Canaliculitis, Dacryocystitis, Lipodermoid. Sebaceous Cyst, Essential Blepharospasm, Crouzon's Syndrome, Kaposi Sarcoma were 0.8% respectively. See Table 1.

Table 2 and Fig. 1 showed that Oculoplastic disorders are more prevalent in female (about 60.2%) than in male (about 39.8%).

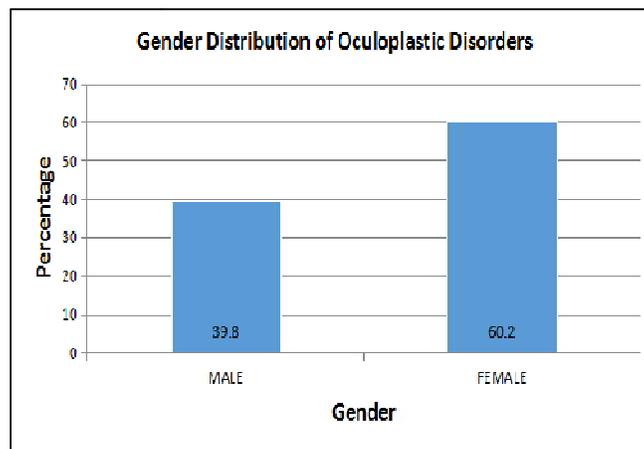
Table 3 and Fig. 2 showed that Oculoplastic disorders are prevalent among patients within the age of 21-30 years (about 33.3%) followed by patients within the age of 31-40 years (about 15.5%). Oculoplastic disorders are less in patients above 70 years (2.4%) and 61-70 years (5.7%).

## 4. DISCUSSION

There were more females than males in this study. This was similar to the findings of Balogun et al who had a female predominance in their study [1]. This was however at variance with some studies that had male predominance among the oculoplastic cases. Some of those studies were carried out by Kaya et al. [6] with 60.4% of male subjects and Anunobi et al. 2 in Nigeria who also reported a male predominance in 56.0% of cases. Female predominance in our study could be due to the fact that females are more sensitive to cosmetic blemishes than males and thus would likely seek oculoplastic intervention than males. In studies with male predominance however, the authors had argued that males were more prone to injuries. This was not our experience and could be due to the fact that the study area had relative peace at the time of study owing to the establishment of amnesty program for repentant militants in an attempt to forestall peace. This reduced incidence of violence and fight which could have predisposed male subjects to injuries.

**Table 1. List of oculoplastic disorders**

<b>Oculoplastic disorders</b>		
<b>S/No</b>	<b>Ocular disorders</b>	<b>Numbers (%)</b>
1	Thyroid eye disease	7 (5.7)
2	Nasolacrimal duct obstruction	7 (5.7)
3	Karposi sarcoma	1 (0.8)
4	Chalazion	40 (32)
5	Ptosis	3 (2.4)
6	Ocular surface squamous	11 (8.9)
7	Plexiform neurofibroma tosis	2 (4.6)
8	Crouzon's syndrome	1 (0.8)
9	Ectropion	7 (5.7)
10	Cyst of zeis	2 (1.6)
11	Dermoid cyst	5 (4.1)
12	Cyst of moll	6 (4.8)
13	Capillary haemangioma	2 (1.6)
14	Essential blepharospasm	1 (8.0)
15	Lipodermoid	1 (0.8)
16	Sebaceous cyst	1 (0.8)
17	Trichiasis	2 (1.6)
18	Chronic canaliculitis	1 (0.8)
19	Dacryocystitis	1 (0.8)
20	Empty socket	3 (2.4)
21	Lid deformity	1 (0.8)
22	Conjunctival mass	2 (1.6)
23	Phthisis bulbi	2 (1.6)
24	Orbital malignancy	4 (3.2)
25	Proptosis	4 (3.2)
26	Implantation cyst	1 (0.8)
27	Ankyloblepharon	2 (1.6)
28	Symblepharon	2 (1.6)
29	Dry eye secondary to facial nerve palsy	1 (0.8)
30	Lacrimal gland tumour	1 (0.8)
	<b>Total</b>	<b>123 (100)</b>



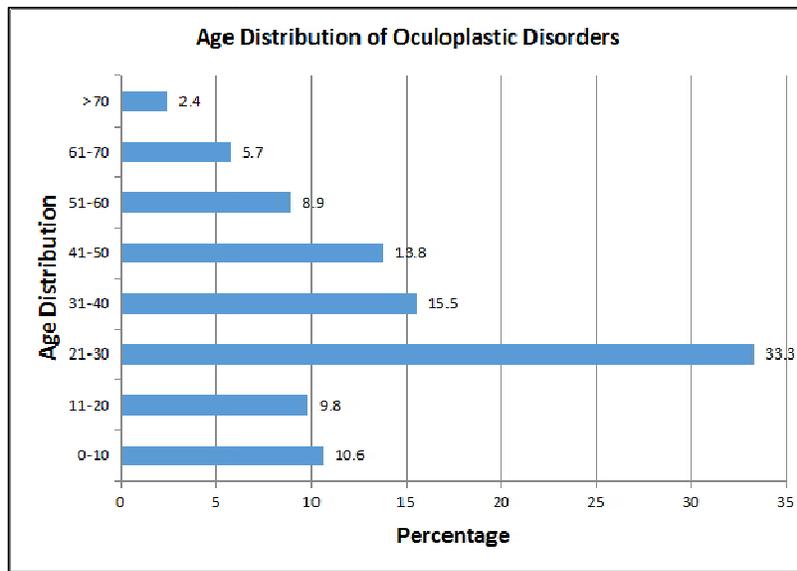
**Fig. 1. Gender distribution of oculoplastic disorders**

**Table 2. Percentage composition of gender distribution**

(Gender distribution)			
S/No.	Sex	Number	Percentage (%)
1	Male	49	39.8
2	Female	74	60.2
	Total	123	100

**Table 3. Age distribution**

(Age distribution)			
S/No.	Age	Number	Percentage
1	0-10	13	10.6
2	11-20	12	9.8
3	21-30	41	33.3
4	31-40	19	15.5
5	41-50	17	13.8
6	51-60	11	8.9
7	61-70	7	5.7
8	>70	3	2.4
	Total	123	100



**Fig. 2. Age distribution of oculoplastic disorders**

The peak age group in our study was 21-30 years and followed by 31 to 40 years. This was similar to the study by Balogun et al [1] where one of the peak age groups was 20-29 years. This was however different from the findings by Anunobi et al. [2] with 51.1% of cases being children under 15 years old and those of Bekibele [3] in Ibadan, Nigeria with 50% of children and young adults from 0 to 20 years old. It was also at variance with the findings of Asad Aslam Khan et al. [4] who observed predominance of adults with 57.47% of cases in

his Pakistani study. The peak age group of 21-30 observed in our study is the age when the young adult is easily embarrassed by deformities. This heightens peer pressure and makes social, academic and economic integration difficult.

Furthermore, the age group of less than ten years contributed 10.6% and could be due to the fact that parents are concerned about congenital anomalies and would like present early for any kind of intervention to avoid permanent deformity

of their children and also save them from future social stigmatization.

## 5. CONCLUSION

Female gender and the age group of 21-30 were seen more with oculoplastic conditions probably due to the more sensitivity of females and also of these young adults to cosmetic blemishes posed oculoplastic related cases.

## CONSENT AND ETHICAL APPROVAL

As per university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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