

## FREQUENCY OF CYSTOID MACULAR EDEMA IN UNCONTROLLED DIABETIC PATIENTS

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### ABSTRACT

**Background:** This study attempted to find the frequency of cystoid macular edema in patients presented in eye opd. Its association with uncontrolled diabetes and surgery is also determined. **Methods:** This hospital based study was conducted from 15 Aug 2017 to 15 Feb 2018 where 500 patients presenting to Ophthalmology unit of Allama Iqbal Memorial Hospital were included. Based on history records and investigations macular edema confirmation was made. **Results:** CMO patients were 56 of total 500 patients amongst whose 62.5% males and 37.5% females. Out of total suspected patients 82.1% had significant CMO, diabetic macular edema was present in 71.4% and pseudophakic macular edema in about 82.1% patients, hence post-surgical CMO is more marked. In early presenters, the diagnosis was made with slit lamp by using non-contact lens only but some of the signs were only visible on FFA and OCT, therefore, it was important for the detailed diagnosis that patient should be exposed to the full diagnostic criteria. **Conclusion:** This study showed that macular edema is a vision threatening disease and cause of irreversible blindness worldwide. So it should be diagnosed properly before the macular scarring occurs. Early diagnosis is important to save the vision.

**KEYWORDS:** Risk factors, irreversible blindness, diagnostic criteria.

### INTRODUCTION

Cystoid Macular edema results from the accumulation of fluid in the outer plexiform layer and inner nuclear layers of retina with the formation of tiny cyst like cavities. Fluid may initially accumulate intracellularly in Muller cells, with subsequent rupture coalescence of smaller cavities may occur over time. It subsequently progresses to a foveal lamellar hole with irreversible impairment of central vision. CMO is non specific manifestation of any type of macular oedema. A multitude of pathological conditions might lead to macular edema, such as inflammatory; disease, retinal, vascular disorders, choroidal neovascularization, exposure to drugs and tractional maculopathies. Damage caused by cystoid macular edema is irreversible.

#### Incidence

1. It occurs more commonly in older people.
2. About 80% cases of uncontrolled diabetic cases have cystoid macular edema.
3. 20% cases of uncomplicated cases of extracapsular cataract extraction have cystoid macular edema.

### Study Methodology

This study was conducted at Benazir Bhutto Hospital and Holy Family Hospital, Rawalpindi. My study was started soon after the approval of synopsis. Patients fulfilled the inclusion criteria and reported to the Out-patient department of both hospitals were enrolled. These patients were the sample size of my study. The data of the patients exposed to diagnostic criteria of particular stage.

### DISCUSSION RESULTS

60 patients were enrolled in the study. Out of 60 patients, 56 responded. 4 patients refused to take part in the study. Most of the patients were male with age group 40-60 years.

In this study, 62.5% patients (35) were males and 37.5% patients (21) were females (Table 1). 57.3% patients (32) were presented between age of 40-50 years, 28.5% patients (16) were within age group of 50-69 years, 14.2% patients (8) with the age between 60-70+ years (Table 2).

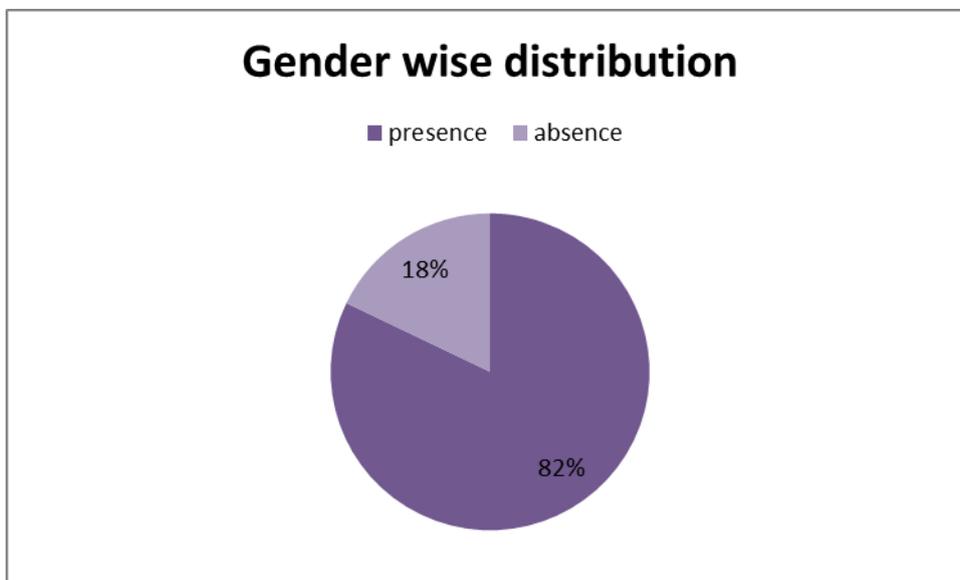
82.1% patients (46) who were included in study had CMO diagnosed on diagnostic tools FFA & OCT, 17.8% patients (10) had no significant macular oedema (Table 3). 50% patients (28) had medical history (M/H) of diabetes mellitus (DM), 8.9% patients (5) had history of hypertension (HTN) and 41% patients (23) had ocular history (O/H) of cataract extraction (Table 4).

Out of 28 diabetic patients 71.4% patients (20) had significant CMO and in comparison out of total 28 post-

surgical patients 82.1% patients (23) had post-operative CMO observed (Table 5,6).

**Table 1: Gender Wise Distribution.**

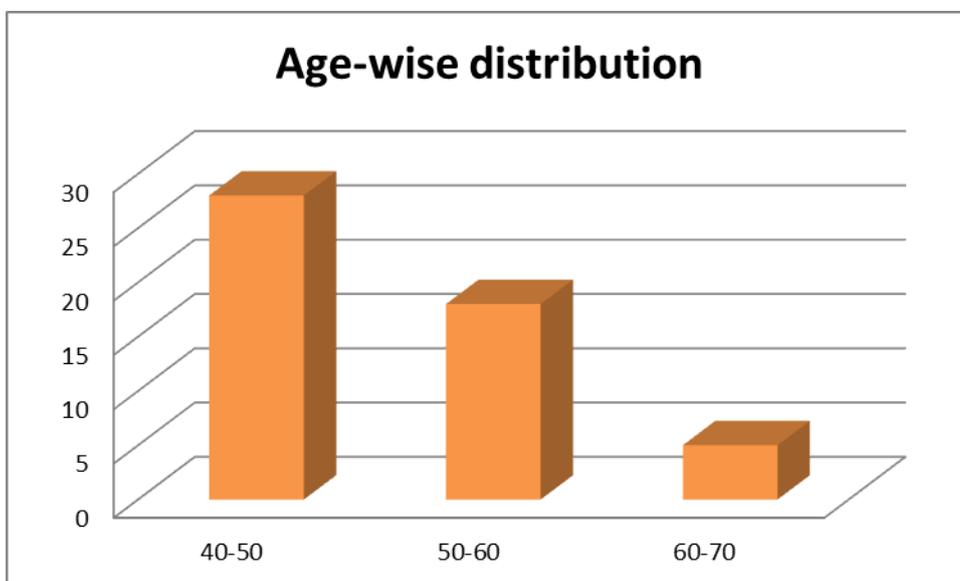
	Frequency	Percent
<b>Male</b>	35	62.5
<b>Female</b>	21	37.5
<b>Total</b>	56	100.0



**Chart 1:**

**Table 2: Age Group (Years).**

	Frequency	Percent
<b>40-50</b>	32	57.3
<b>50-60</b>	16	28.5
<b>60-70</b>	8	14.2
<b>Total</b>	56	100.0



**Chart 2:**

Table 3: Cystoid Macular Oedema Daignosed.

	Frequency	Percent
<b>Positive</b>	46	82.1
<b>Negative</b>	10	17.8
<b>Total</b>	56	100.0

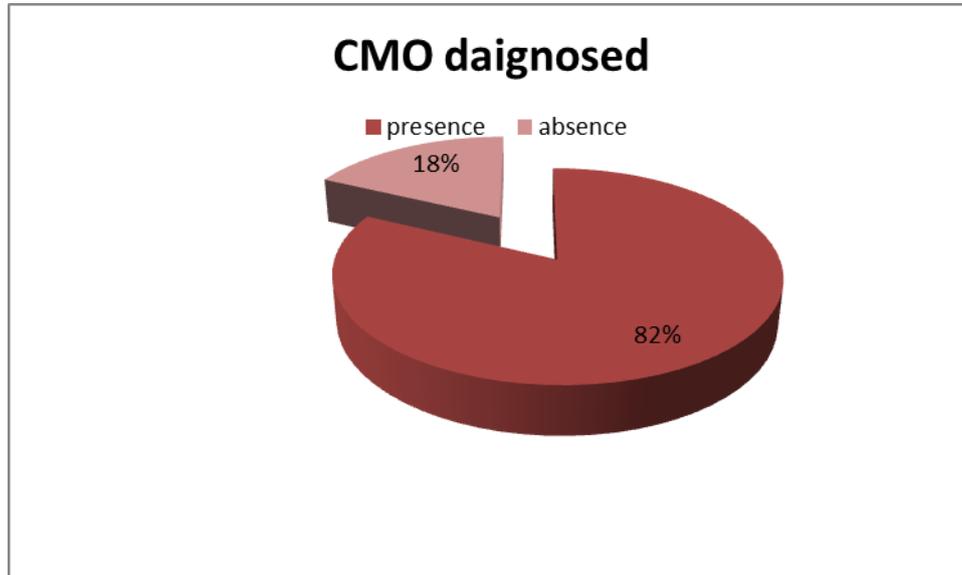


Chart 3:

Table 4: Medical History.

	Frequency	Percent
<b>Diabetes</b>	28	50
<b>Hypertension</b>	5	8.9
<b>Cataract extraction</b>	23	41.1
<b>Total</b>	56	100.0

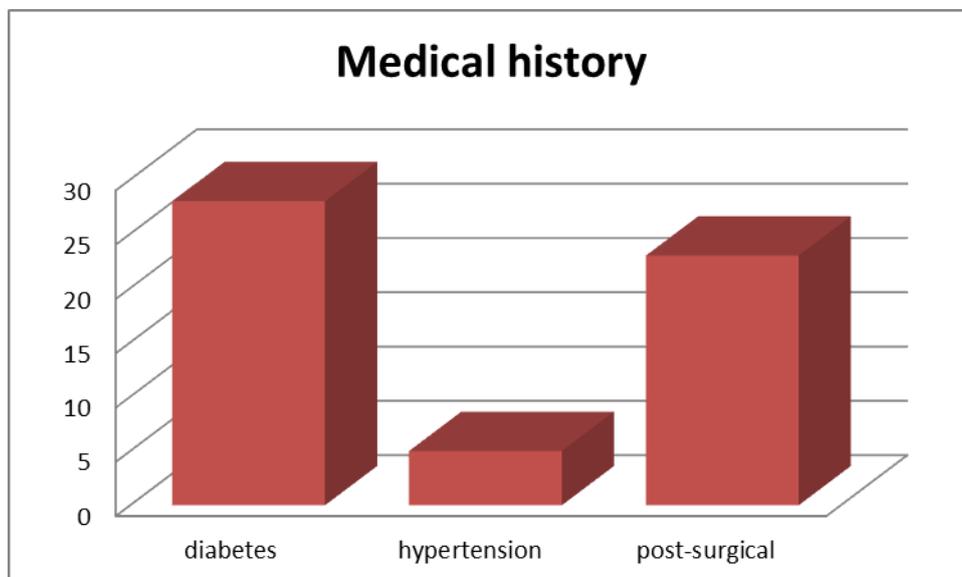
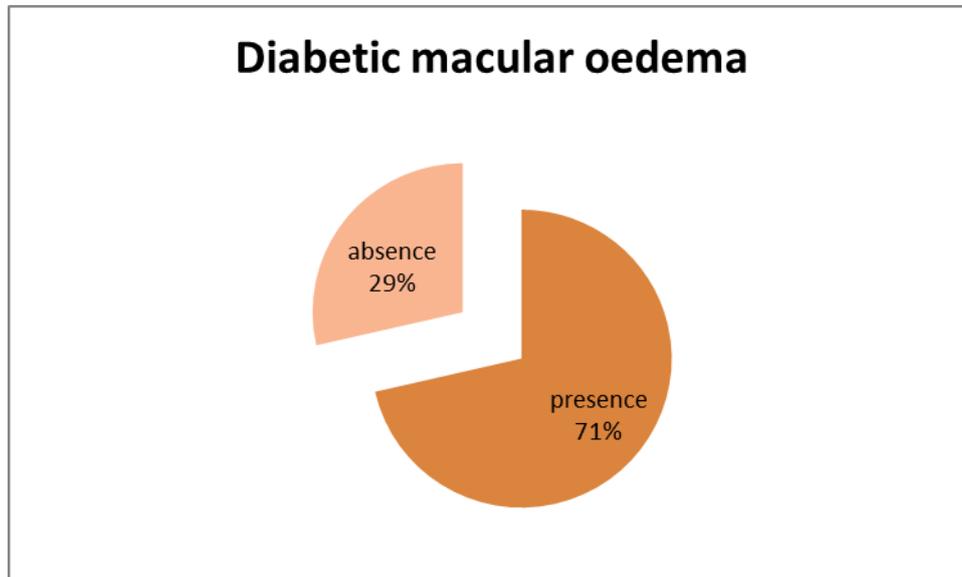


Chart 4:

**Table 5: Diabetic Macular Oedema in Uncontrolled Diabetics.**

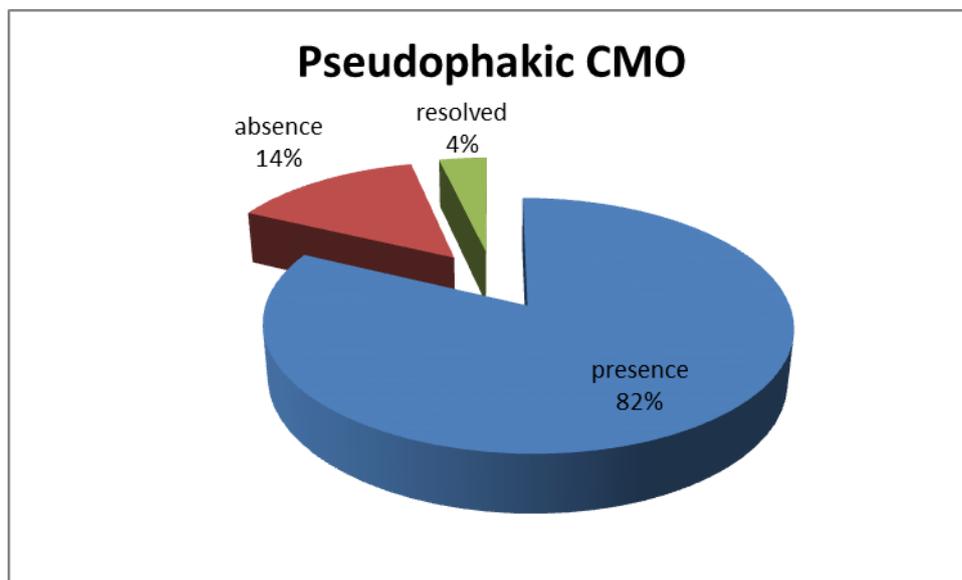
	Frequency	Percent
<b>positive</b>	20	71.4
<b>negative</b>	8	28.6
<b>Total</b>	28	100.0



**Chart 5:**

**Table 6: Pseudophakic Macular Oedema in Post-Surgical Patients.**

	Frequency	Percent
<b>present</b>	23	82.1
<b>absent</b>	5	17.9
<b>resolved</b>	0	0.0
<b>Total</b>	28	100.0



**Chart 6:**

**DISCUSSION**

This study was conducted to diagnose the patients at early stages so that their vision can be restored. It was

hospital based study population based study was not possible because of limited resources and time period. Patients were exposed to diagnostic criteria and all

efforts were put to treat them and to restore their vision. out of total 56 patients 62.5% were males. Out of patients included in study 82.1% had macular edema diagnosed on diagnostic tool FFA. DME was observed in 71.4% patients and pseudophakic macular edema in 82.1% patients.

After proper diagnosis patients were refer to vitero-retinal surgeon and patients were advised to show compliance and proper follow-ups for fruitful results.

## CONCLUSION

This study showed that macular edema is a vision threatening disease and a leading cause of irreversible blindness worldwide. So it should be diagnosed properly before the advanced macular defects and macular scarring occurs. Early diagnosis is important to save the vision.

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