



Prevalence of Savrana Shukra W.R.T Post Traumatic Corneal Opacity among the Daily Wages Workers in Navi Mumbai

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ABSTRACT

Purpose: This study investigates distribution pattern & prevalence of corneal opacity in daily wages workers in Navi Mumbai. As the daily wages workers are majorly illiterate & to meet with their daily necessity of human beings they have to work daily on the day wages without any skill & safety equipment or measurements. So they are very prone for frequent ocular injuries.

We aim to report the prevalence of traumatic corneal opacity among the daily wage workers of Navi Mumbai.

Methods: A cross-sectional study was carried out among 1500 daily wage workers with the mobile eye clinic under the Eye screening program of Prabhat Trust. Demographic data were entered by the respected worker with valid government id proof & Screening included {torch light examination, Vision taking, Refraction, Examination of Squint by cover & uncover test} by trained optometrist. The screening was conducted in various centres (Naka) of daily wage workers in 12 sub-division of Navi Mumbai.

Results: The prevalence of corneal opacity was 118 (7.4%)

Among which macular opacity was the most common type present in 48 (40.7%), followed by nebular opacity in 39 (33.1%) and the remaining 31 (26.3%) with leucomatous opacity

Males had slightly higher corneal opacity 62 (6.93%) than females 56 (5.9 %).

Conclusion: The study provides useful and baseline data about the corneal injuries & prevalence of opacity amongst the daily wages workers of Navi Mumbai. A larger study needs to be conducted in all the subdivisions of the state to get a clearer picture of corneal opacity and other eye related diseases to detect vision problems as early as possible to provide the needful assessment to the labourers.

Timely intervention for eye examination plays an important role to protect these workers from becoming blind because once there is an injury it needs treatment as soon as possible. If not then the condition can get worse & it might slowly-slowly hamper vision. Active screening and timely intervention will not only help in vision restoration but will also influence the awareness of health & continuous wages work to earn for livelihood.

KEYWORDS: Macular; Nebular; Prevalence; Leucomatous; Refractive error; Opacification.

PURPOSE

This study investigated the distribution pattern & prevalence of corneal opacity in daily wages workers in Navi Mumbai. As these workers are unskilled & illiterate, to meet their basic necessity they have to work on the daily wages. Without any safety equipment they work in hazardous surroundings. If they were skilled they could not identify work related probable hazards. Although they were happily doing their work due to lack of awareness. Because Of these factors they are more prone to meet up with eye injuries, may their visual acuity get hampered & they can even turn blind. To avoid such incidents by creating awareness

prevention may be the optimal approach for reducing corneal blindness. We aim to report the prevalence of corneal opacity among the daily wage workers of Navi Mumbai.

METHODS

A cross-sectional study was carried out among 1,500 daily wage workers under Prabhat Trusts mobile eye clinic working for daily wage labour eye screening program. Demographic data were entered by trained social workers, with the respected labour valid government id proof & Screening included {torch light examination, Vision taking, Refraction, Examination of Squint by cover & uncover test} by trained optometrist. The screening was conducted in various centres (Naka) of daily wage workers in 12 subdivision of Navi Mumbai.

Study design

A cross-sectional study was conducted among the daily wage workers of Navi Mumbai during January 2022- October 2022. The study was done by Prabhat Trust Solar powered Mobile Eye clinic for identification and treatment of corneal opacity. The screening was carried out in 12 subdivisions of Navi Mumbai.

Study population

A total of 1,595 workers were screened for eye examination. For this screening programme informed and written consent was obtained from labours.

Eye examination

A team consisting of an ophthalmologist, senior optometrist & social worker visited the selected (Naka) areas. Depending upon the total number of workers randomly selected labours were screened. Senior optometrist was there to take history of Eye injury & torch light examination to rule out any unusual suspected Foreign body or corneal opacification of the Labour. In a mobile eye clinic optometrist did auto refractometer reading, lensometer if the worker has their glasses & subjective refraction by placing the appropriate lenses in the trial frame. Using a cover-uncover test to evaluate squint in the patient. The visual acuity was tested with the digital Snellen chart & referred to the ophthalmologist for detailed eye examination on slit lamp.

At the base hospital further complete ophthalmic examination was done by the ophthalmologist for gradation of corneal opacity.

The data were entered into the Excel sheet and analysed using the Statistical Package for the Social Sciences version 16.0 (SPSS Inc, Chicago, IL, USA). The data were expressed as proportions (*n*, %).

RESULTS

Total of 1,500 workers were screened from 12 subdivisions of Navi Mumbai. Some other ocular cases like squint, vitamin A deficiency, and cataract were also diagnosed by the ophthalmologist but could not be recorded for analysis due to the unavailability of data.

Patients with the opacification were more prone to get cataract at an early stage of life as this can make Partial or total damage to the zonules may also occur, resulting in subluxation of the crystalline lens. which give rise to the other surgery in need for them.

The prevalence of corneal opacity was 118 males had slightly higher corneal opacity 62 than females 56.

Table 1: During the screening we came across different types of eye problems that the workers were suffering from & the prevalence of corneal opacity among those was equivalent to all together so far.

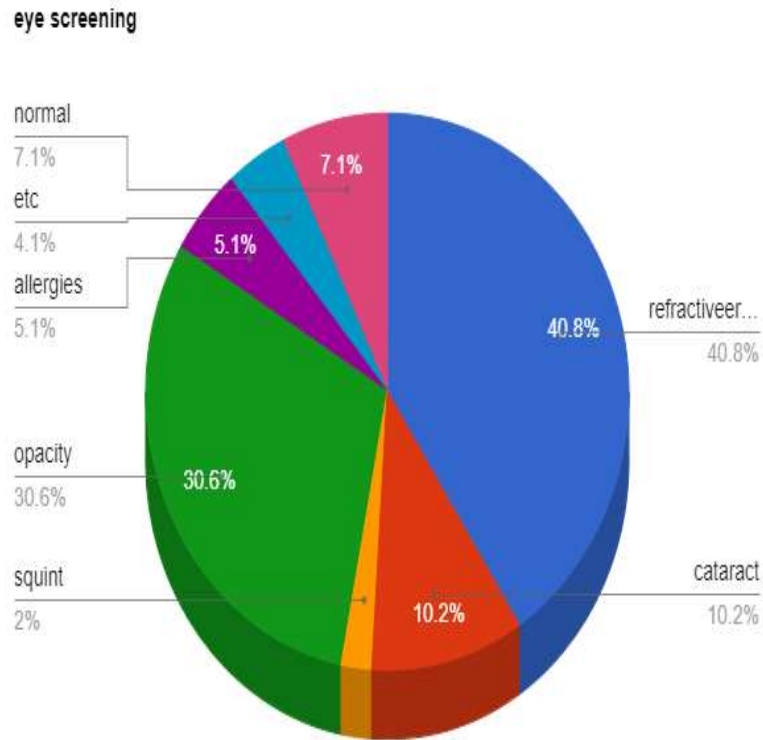
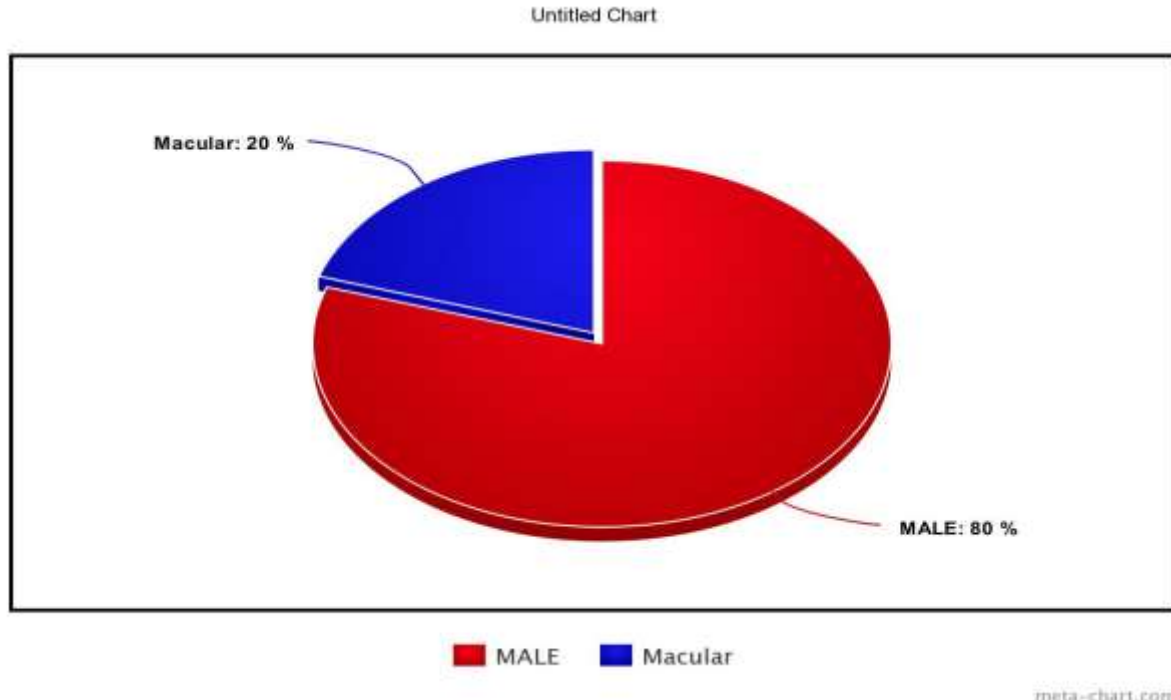
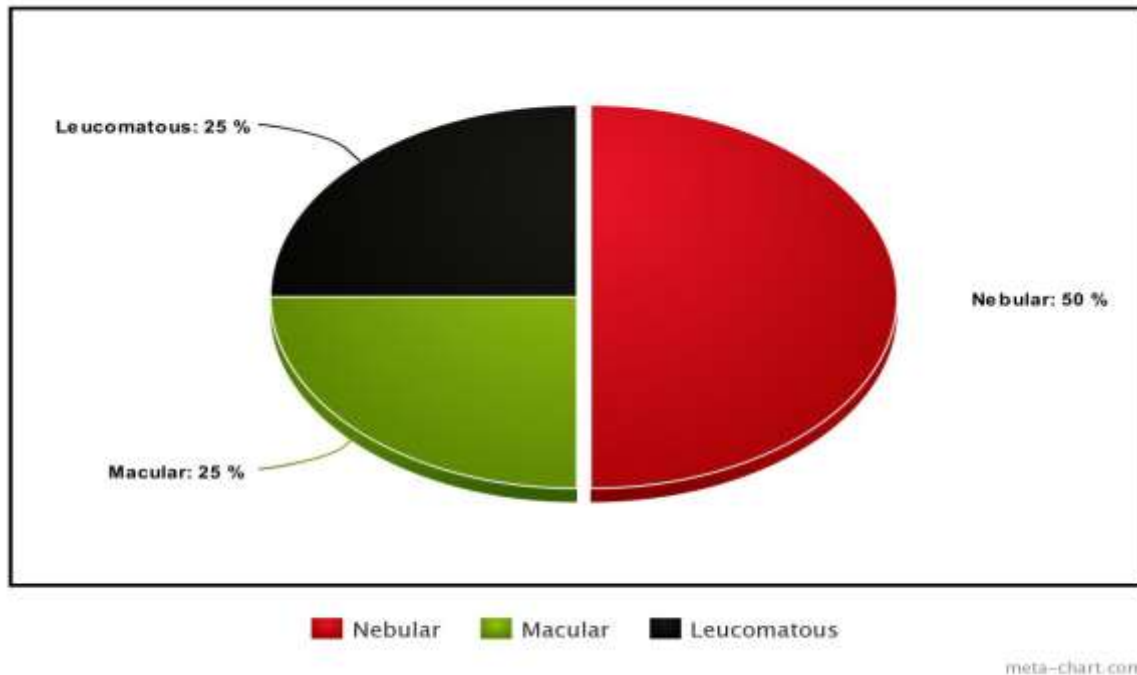


Table 2: Gender distribution of daily wage workers having corneal opacity in Navi Mumbai where male are prone to have more corneal opacity as compared to females.



Among which nebular was the most common corneal opacity was present in 48 (40.7%) workers, followed by macular in 39 (33.1%) and the remaining 31 (26.3%) with leucomatous.

Table 3: Corneal opacity based on nebular, macular , and leucomatous among the workers



DISCUSSION

The team were aware about the condition because due to poor financial conditions and an unstable income source these workers couldn't get the proper treatment.

Mens were mostly affected with corneal opacity as compared to womens and many have reported similar studies.

Nebular was the most common corneal opacity followed by macular and leucomatous being the least and many studies have reported similar results.

Conclusion

The study provides useful and baseline data about the daily wage workers of Navi Mumbai. A larger study needs to be conducted in all the subdivisions of the state to get a clearer picture of corneal opacification and other eye related diseases to detect vision problems as early as possible to provide the needful assessment to the workers.

Timely intervention for eye examination plays an important role to protect workers from becoming blind. As corneal opacification can further lead to a cause of blindness for the patient which is a sight threatening issue by which their daily income source can be hampered due to its visual acuity . 9o

Trauma is often the most significant cause of unilateral loss of vision in developing countries,(1) and up to 5% of all bilateral blindness has been attributed to direct ocular trauma.(2)

An estimated 19 million workers are visually impaired worldwide of which 1 million are due to corneal opacity which could be easily corrected.[²] Yearly screening of workers plays an important role to prevent visual impairment.

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Conflicts of interest

There are no conflicts of interest.

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