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Review Article

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Use of Camera in Medical Diagnosis

Neha Suthar[1], Sachin C Narwadiya[2]

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Abstract

We must acknowledge the inventor of the camera: Louis Le Prince. Cameras have long secured their place in our daily lives. It doesn't just apply to the cameras in our smartphones or the digital cameras we use for vacation pictures. ATMs, toll booths, security firms guarding buildings and eye doctors using slit lamps all rely on cameras to do their jobs. Yet even the most observant among us can easily miss most of the devices because they involve tiny cameras used in embedded systems. Medicine and research require cameras that perform well daily for the vital work that scientists, doctors, nurses and patients do, all without focusing on each other. Let's imagine how this technology benefits various medical diagnostics branches. The field of ophthalmology relies on high-resolution machine vision cameras to aid in diagnosing and imaging the retina. For these applications, it is often recommended to use machine vision cameras up to 31 megapixels to detect even the most minor details in the retinas (the retina: the area at the back of our eye that is sensitive to light and transmits the image of what we see to our brain) This the field has gained importance in recent years because early detection of diseases such as diabetic retinopathy or macular degeneration can significantly increase the chances of successful treatment. A modern ophthalmologist has many diagnostic devices and methods at his disposal. One widely used examination device is the slit lamp microscope (or slit lamp for short).

Keyword: Diabetes Mellitus; Endothelial Cell Density; Co-efficient of Variation; Hexgonality.

INTRODUCTION

The name refers to the slit like beam of light used to illuminate the eye, allowing further examination by the microscope in reflected light. Most modern slit lamps include integrated digital cameras to document the diagnosis in photos or videos. Doctors use a fundus camera to create high resolution photographs of the back of the eye. Newer portable models are designed to be very light and ultra compact, meaning an integrated camera is a must. The increasing mobility of mobile devices is a significant help to doctors and patients as diagnostics can now be performed.

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Dermatology: Dermatology is focused on skin diseases. Early skin cancer diagnosis (melanoma) can make a huge difference in successful treatment. One of the standard diagnostic procedures is dermatoscopy. An integrated camera is used to examine and document suspicious skin changes. It is done at different time points to digitally record the development of the pigment. Special software is used not only to archive images but also to analyze them. The built-in cameras play a vital role in compensating for different shooting conditions, including light and angle, in ensuring images are comparable over extended periods. The colour fidelity of the camera is also an essential factor in keeping the diagnosis as specific as possible.

Lab devices: In the present age of advanced technology, machine vision cameras have become essential for many applications. The cameras have applications in the medical sector example includes diagnostic devices, laboratory automation.

Medical Imaging: In the medical imaging high quality and sensitive cameras are often used. The vision mechanisms are also useful with artificial intelligence to execute complete blood counts. Process Automation & Quality Control: At present, we are using a fully developed quality control system in medical laboratory diagnosis centres; all fully auto analyzer gives the best quality assurance in patients' sample so that it will be helpful for further treatment for the patients, we can't imagine this whole process without a camera! Lab automation is relevant in chemistry, biology, pharmaceutical and food technology, and medicine. The objective is to improve processes, generate more results in less time, avoid errors, document analyses and experiments in a traceable manner and reduce costs simultaneously. Basler cameras support tasks such as sample identification and sorting (e.g. barcode recognition, colour and pattern recognition) or process and quality control (e.g. sample management, control of analytical reactions).

Bioimaging: Bioimaging creates images of human structures and functions: from anatomical regions and tissues to cells and molecules. In biomedical research (e.g. cancer research) and routine diagnostics (e.g. histopathology), many samples are examined and evaluated quickly. Digital slide scanning enables full automation of the workflow, increasing quality and efficiency. Sensitive Basler cameras allow fast acquisition of high-resolution images with perfect colour fidelity with short exposure times for maximum sample protection. In industrial applications, machine vision cameras are used in quality control. Believe it or not, many basic applications are the same in the life sciences. Some critical uses of vision systems include: Inspection to ensure that adequate biological samples have been collected; Inspection of disposable materials such as needles to check for defects; Monitoring laboratory sample changes when researchers are away; Verification of test results by ensuring appropriate sample handling. To meet these obligations, life science camera systems should be small, compact, and self-contained the more sophisticated the integrated image sensor, the better the image quality and the clearer the results. Systems must increasingly be truly multifunctional to meet laboratory needs. Lighting and communication capabilities should be built into the camera as a cohesive unit. This facilitates the continuous capture of information using the network. Another advantage of machine vision cameras in medical imaging is parameter transparency.

In addition, machine vision cameras offer complete control over camera setup and acquisition and are designed for 24/7 operation, which can be advantageous for high volume laboratories and medical centres. Based on these above points, all the quality control of a medical diagnostic laboratory indirectly depends on the camera. Surgery There is nothing wrong with using a camera in surgery as a doctor's assistant; without a camera, the surgery is almost incomplete, as we all know. Machine vision cameras are increasingly being used to optimize surgical microscopes in minimally invasive surgery and micro surgeries, such as plastic surgery, reconstructive surgery, neurosurgery, and spine surgery. Cataract surgeons, for example, benefit from machine vision cameras, as these tools can often offer greater precision and accuracy and ensure optimal visual outcomes for patients. Cancer High speed, high resolution machine vision imaging systems have been developed to perform a non-invasive optical biopsy to assess cancer. Pathologists and surgeons use these cameras to provide real time imaging at the cellular level, which can help diagnose various types of cancer. A gamma camera (γ-camera), also called a scintillation camera or Anger camera is a device used to image gamma rays emitting radioisotopes, a technique known as scintigraphy. Applications of scintigraphy include early drug development and nuclear medicine imaging for viewing and analyzing images of the human body or the distribution of medically injected, inhaled, or ingested gamma emitting radionuclides. Drug Discovery Camera is also used by drug companies which is practical and gives the best results. Some companies are also using machine vision technologies combined with machine learning to "reposition" drugs and shelved pharmaceutical components to identify potential new targeted treatments for rare genetic diseases. These companies use raw images obtained by machine vision cameras and machine learning techniques to analyze therapeutic compounds in various conditions. In addition, pharmaceutical companies and drug processing centres can use machine vision technologies to capture multiple images of pills during production to ensure the quality of medical prescriptions. In this context, machine vision cameras can identify minor cosmetic defects often considered unacceptable by consumers and regulators. Automated vision systems allow detailed examination of pills from different angles to identify these flaws and reduce the risk of defective products entering the market. The cameras can also adapt to the high speed at which pills are delivered to and through the production line, facilitating accelerated image acquisition and analysis for drug manufacturers. They usually enhance the knowledge and skills of the doctor to make the diagnostic process faster, easier, and more accurate. So, next time wherever you click your picture, remember that this camera is also helpful in the internal parts of our body for medical diagnosis.

CONCLUSION

The use of camera in medical field and health sector revolutionized mode of healthcare delivery system. There is need to explore more and more possibilities for the use of high quality and highly sensitive camera in the diagnosis and reaching to remote locations. The health sector is working on noble cause of eradication of deadly diseases and hence such technology is currently needed which will be easily accessible by the users. The death rates need to be lowered by use more and more technologies in health care. Block chain, internet of things is the new area to explore for advancement in healthcare.

REFERENCES

1. Lahiri, B.B., Bagavathiappan, S., Jayakumar, T. and Philip, J. (2012), Medical application of infrared thermography: A review. Infrared Physics and Technology, Volume 55 doi:10.1016/j.infrared.2012.03.007
2. Thermal imaging. (2014) Thermal Imaging of the Southwest. http://www.tiofsw.com/Breast Screening. (2014) Thermography Arizona.
3. http://www.thermographyarizona.com/Clinical cases. TermografiaJozéValdez.http://www.thermography.pt/en/cases PDeS 2015 May 13-15, 2015. Cracow, Poland 496
4. T. Starner, J. Auxier, D. Ashbrook and M. Gandy, "The gesture pendant: a self-illuminating, wearable, infrared computer vision system for home automation control and medical monitoring," Digest of Papers. Fourth International Symposium on Wearable Computers, 2000, pp. 87-94, doi: 10.1109/ISWC.2000.888469.

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Case Report

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A Case of Late Onset Stargardt Disease

Tamboli Kshitij S[1], Balwir Dhiraj N[2], Patil Mrunal S[3], Dhamane Anushka S[4], Chute Maitreyi A[5]

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Abstract

Purpose: We report a case of late onset Stargardt's disease in a 51-year-old patient who came with bilateral, symmetrical decrease in the visualacuity. Stargardt disease is the most common form of juvenile macular degeneration. Clinically, it is characterized by pisciform flecks at the level of the retinal pigment epithelium and a bull's eye maculopathy. This observation draws attention to the existence of Stargardt's disease at a late stage.

Keywords: Stargardts disease , Late onset ,Vision loss.

INTRODUCTION

Stargardt disease is the most common type of hereditary autosomal recessive macular dystrophy.[1] The estimated incidence of disease is 1 in 10,000 (live births), and it characteristically presents in juveniles and young adults.[2] It is a bilateral and symmetrical maculopathy that progresses rapidly to macular atrophy and loss of central vision. It was described perfectly in 1909 by the German physician Karl Stargardt. As a particularity, it is a disease that can be transmitted according to the autosomal dominant mode, in late forms of the fifties, and even forms associating neurological disorders are noted.[3] Patients begin to experience a bilateral, gradual decline in their vision between the ages of 6 and 20 years in classical form. This condition affects retinal pigment epithelium . In people with Stargardt disease the RPE collects lipofuscin, which can lead to vision problems.[4] A small number of families were found to have an autosomal dominant pattern of inheritance. This form is called a "stargardt like" disease, and looks similar to the autosomal recessive form. These two forms are actually different diseases with different mechanisms. Autosomal recessive Stargardt disease is caused by mutations in a gene called ABCA4. A second gene called ELOVDT has been found to be the cause of the autosomal dominant form of Stargardt like disease. Severity of disease may be related to how severely a gene change affects gene function.[1] The late onset of the disease is not exceptional; the adult form (third and fourth decade); the atypical form (fifth and sixth decade) can also be encountered. Visual acuity is the first functional sign; classically, it falls in a few years and stabilizes after 4 or 5 years.[3]

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CASE REPORT

We report a case of 51-year-old patient who came for consultation for decreased far vision since 1 year. No significant systemic history was present. Visual acuity was counting fingers at 1 meter in both eyes. Red green color defect noted on color vision test on ishihara chart. The anterior segment examination on slit lamp was normal. The ocular tension taken with the applanation tonometer was 16 mmHg. The color vision tested with the Ishihara Test showed a red-green disorder. Dilated examination onindirect ophthalmoscopy (fundus image: fig.1) showed elongated light colored piscifom cluster of flecks at the RPE, RPE atrophy at the macula seen bilaterally, obscuration of choroidal vessels and hyperpigmentation was noted, Oct showed (fig. 2) atrophic changes and thinning of retinal layers at the macula.

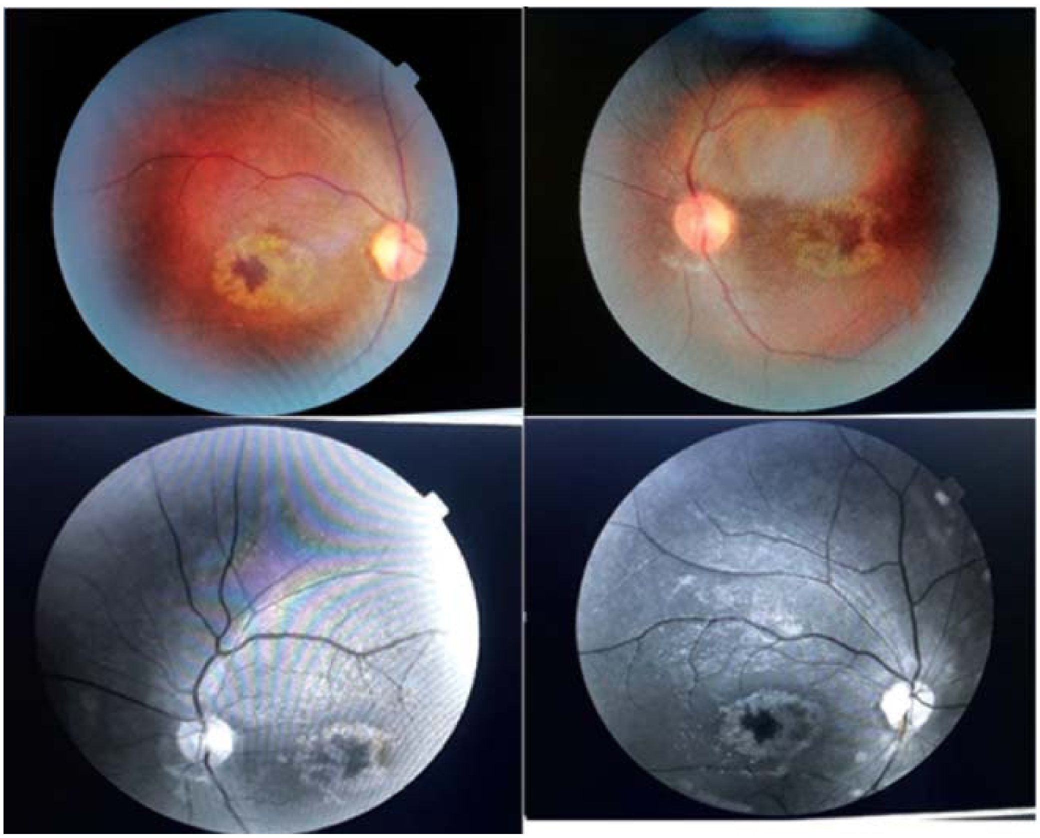

Fig. 1: OCT images

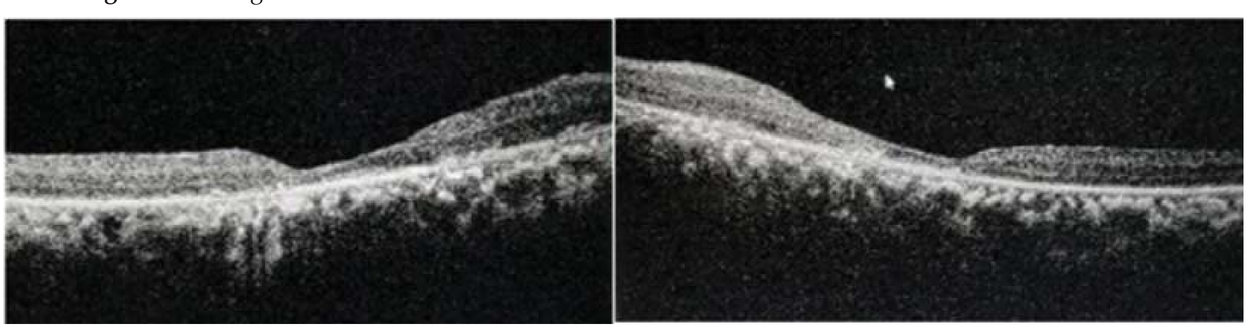

Fig. 2: OCT images

DISCUSSION

In our case, non specific mottling was seen at the fovea. Oval macular lesion about 1.5 disc diameter in size was seen giving the appearance of Bull's eye maculopathy. Macular lesion surrounded by yellow white flecks was noted. Atrophic changes in the RPE and secondary changes in the photoreceptors.[1] Patients with Stargardt's disease usually have a poor visual prognosis. However, in a study conducted by Nakao and al, Japan in 2012, they observed in some patients despite the dark red foveal pigmentation, good visual acuity corrected despite the presence of the disease at an advanced stage.[5] In a study done in Pakistan in 2008 by Shah and al, it shows that patients with Stargardt's disease respond well to magnification (magnifying glass). Thus, simple bifocal glasses can be used at the first stage of the disease.[6] In our study, we found that our patient had difficulty to recognize red color as well as green; this is the finding made by *Mäntyjärvi et al.* where the defect of the red color became stronger at the advanced stage of the disease. Stargardt's disease has always been considered to be transmitted autosomal recessive according to several literatures.[7] In a 1988 study conducted by *Weber et al.*, they present an unusual example of the dominant character of Stargardt's disease from a family tree study of an extended family of ten members.[8] At present there is no cure for Stargardt disease and there is very little that can be done to slow its progression. Wearing sunglasses to protect the eyes from UVa, UVb and bright light may be of some benefit. U-V blocking sunglasses are generally recommended for outdoors. For people who already have significant vision loss, low vision aides are available.[1,9,10]

CONCLUSION

Stargardt's disease is bilateral and symmetrical hereditary maculopathy, which varies in presentation. Stargardt disease with late onset is rare but exists. The management of the condition remains palliative (wearing tinted glasses, magnifying glasses, psychological support, and genetic counselling).

REFERENCES

1. Syed Abdul Wadudr, Muntasir Bin Shahid2, SumonAfrozIBSMMU Case Series of Stargardt's Disease-our Experience J 2014; 7 (2): 147-150.
2. Anderson KL, Baird L, Lewis RA, et al. A YAC Contig Encompassing the Recessive Stargardt Disease.
3. Bienvenu YA, Ginevra KL, Julien MM, Rebecca BS, Herve NN, Beaudry OM, et al. (2019) Stargardt Disease With Late Revelation: Case Report. J Eye Dis Disord 4:126.
4. American Academy Of Ophthalmology, Retina and vitreous 2012-20 1 3 ; L I :23 4-236.
5. Nakao T, Tsujikawa M, Sawa M, Gomi F, Nishida K. Foveal sparing in patients with Japanese Stargardt's disease and good visual acuity. Jpn J Ophthalmol. 2012;56(6):584-588.
6. Shah M, Zaman M, Khan MT, Khan MD. Visual rehabilitation of patients with Stargardt's disease. J Coll Physicians Surg Pak. 2008; 18(5):294-298.
7. Mäntyjärvi M, Tuppurainen K. Colour vision and dark adaptation in high myopia without central retinal degeneration. Br J Ophthalmol. 1995;79(2):105-108.
8. Weber BH, Sander S, Kopp C, Walker D, Eckstein A, Wissinger B, et al. Analysis of 21 Stargardt's disease families confirms a major locus on chromosome 1p with evidence for non-allelic heterogeneity in a minority of cases. Br J Ophthalmol. 1996;80(8): 745-749.
9. http: 1 lwww.kellogg.umich .edulpatientcareldown -loads/Understan d-Stargardt.pdf
10. Ozdek S, OnaranZ, Girelik G, Bilgihan K, Acar C, Hasanreisoglu B. Stargardt's disease and retinitis pigmentosa: different phenotypic presentations in the same family. Eye (Lond). 2005;19(1 L):1222-5.

Case Report

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Case Report on Orbital Cellulitis

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Abstract

This article advocates the need for early interventions and the use of intravenous antibiotics in cases of orbital cellulitis. We report a case of a 25 year old with orbital cellulitis and a discharging sinus, which had rapidly developed over a period of 6 days. History revealed the presence of a stye over the nasal side of the right upper lid which rapidly developed into swelling of the eye. The patient was admitted for 5 days and intravenous antibiotics were given along with topical medical medications and response was noted.

Keywords: Orbital Cellulitis; Sinus; Antibiotics; Stye.

Key Messages: In cases of orbital cellulitis a detailed history is very important to rule out the causes and ocular examination is must to note progress of management. Orbital cellulitis is a life threatening condition and this requires a prompt management.

INTRODUCTION

Orbital cellulitis is an Infection and inflammation of the soft tissues of the eye socket that is posterior to the orbital septum.[1] It most commonly occurs due to acute spread from the adjacent paranasal sinuses or other closely related structures such as the face, eyelids, or the lacrimal drainage system via the bloodstream or it may occur due to exogenous causes like trauma, foreign body or it can be after surgery.[2] Orbital cellulitis is an ocular emergency that needs a through examination and management.

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CASE REPORT

A 25 year old male presented to our hospital ER, complaining of right eye Pain, Redness, and Swelling of the eyelid for 6 days. It was gradual in onset, and progress rapidly within these 6 days with a significant decrease in vision. The patient had a history of stye over the nasal side of the right upper lid 6 days before onset eye swelling which ye had rubbed with hand. After 2-3 days of rubbing patient developed swelling of the eye for which patient went to a district hospital hospital from where he was referred to us and presented to us. There was no history of any sinus infection, upper respiratory infection, dental infection, or any other chronic systemic illness.

There was no history of covid-19 infection.

A through ocular examination of patient was done and clinical findings were as under:

On examination facial asymmetry was present. There was swelling of right upper and lower eyelids with tenderness over swelling.

Ocular movements in right eye was restricted in all 9 gazes with grading of -4.

Orbital tone of right eye was raised.

Axial proptosis of right eye of approximately 5 mm was present.

BCVA of right eye using Snellen's chart was 6/24 and left eye was 6/6

Pupillary reaction: Direct and consensual was present in both eyes.

SLIT LAMP EXAMINATION

Right eye

Lids: Swelling of upper and lower eyelid. Eyelashes matted with discharge. Pus discharging sinus on temporal side.

Conjunctiva: chemosis was present.

Cornea, iris and pupil were within normal limit.

LEFT EYE

Within normal limits.

Fundus examination of both eye done with indirect ophthalmoscope using 2.2 D lens was within normal limits.

Investigations

COVID-19 RTPCR negative.

Complete blood count showed increased neutrophils. Absolute neutrophils were increased.

Culture: mixed bacterial growth.

Computed tomography of head and orbit with and without contrast s/o soft tissue thickening along the extra-conal compartment of the orbit along the supero-lateral aspect. Posteriorly the lesion extending along the lateral orbital wall and just reaching the orbital apex alon the superior orbital fissure without significant mass effect over optic nerve.

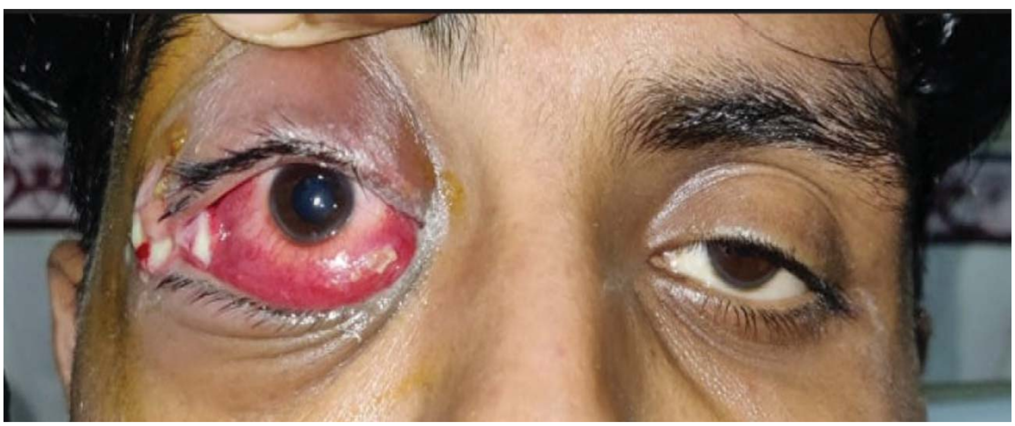

Fig. 1: At Presentation

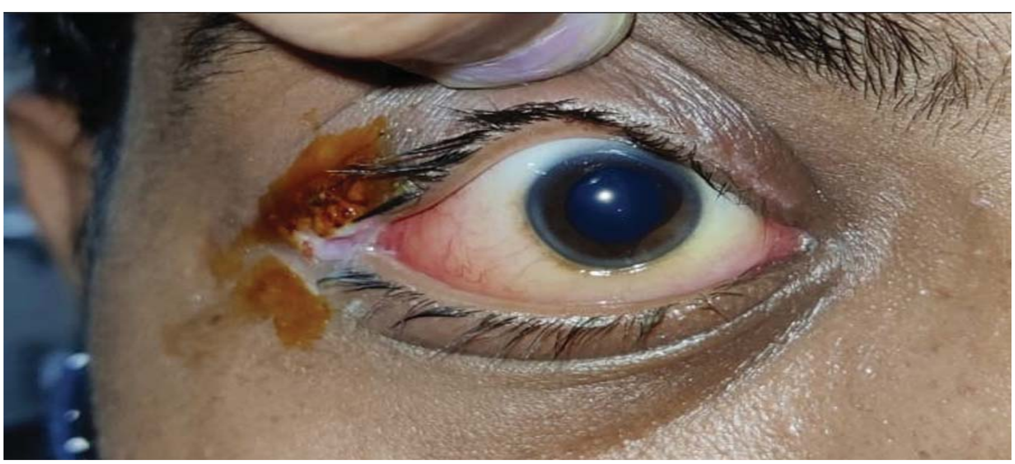

Fig. 2: After One Week

TREATMENT

Patient was given medical treatment in the form of:

Injection Piperacillin + Tazobactam 4.5gm 12 hourly for 5 days

Eye drop moxifloxacin 6 hourly

Eye drop homatropine HS

Eye ointment carboxymethyl cellulose 12hourly

Eye ointment betadine 12 hourly

Tablet diclofenac + serrati peptidase 12 hourly

Tablet pantoprazole once a day before breakfast for 5 days

Tablet betamethasone 3mg for 3 days (measured according to weight)

Patient was examined in daily rounds in morning and evening

After 3 days of systemic antibiotics and topical medications:

General condition of the patient improved.

BCVA: 6/9 on Snellen chart.

The pain was relieved.

The lid oedema and the chemosis were reduced.

The ocular movements had improved.

Patient was discharged after 5 days. Oral medications continued for 5 days and patient was on topical medication for one month.

Patient visited after 1 week

Ocular movements were full in all gazes

BCVA(RE) was 6/9 on Snellen chart

Topical steroids were tapered and discontinued after 15 days.

DISCUSSION

Orbital cellulitis is a life threatening condition cavernous sinus thrombosis and this calls for prompt and specific interventions in cases of orbital cellulitis.[1] These infections may spread to blood stream or through the affected orbital wall. These veins drain into pterygoid plexus or cavernous sinus. The characteristic feature of these veins is they are valveless. Infection may spread to cavernous sinus and can lead to cavernous sinus thrombosis, meningitis and brain abscess and these may eventually lead to demise of the patient. Bilateral orbital cellulitis may occur due to bilateral involvement of cavernous sinus.[3] The diagnosis of orbital cellulitis is mainly clinical aided with radiological findings particularly CT scans and MRI. Mainly orbital cellulitis presents clinically with proptosis, restricted ocular involvements, pain and purulent discharge, decreased vision and chemosis. Patient may present with fever, malaise and fatigue.[4] In case of intra cranial spread patient may present with altered consciousness. The most common organisms involved are staphylococcus and streptococcus. Bacteroides, Pepto streptococcus, Peptococcus are common in adult infections and older children. Fungal infections are common in immunocompromised patients.[5]

CONCLUSION

Orbital cellulitis with a history of stye is one of the common etiology. This requires a proper history of any kind of small or large swelling on eyelids. It can cause rapid clinical deterioration and intracranial extension. Orbital cellulitis is an ocular emergency and needs prompt action. In our cases, a combination of piperacillin and tazobactam antibiotics showed a good response to orbital cellulitis and a reversal of symptoms. Apart from proper treatment, serial clinical ophthalmic examinations after initiation of treatment are very important to note the progress of the treatment and resolution of symptoms. Orbital cellulitis with discharging sinuses requires a proper systemic and topical management.

Conflict of interest: Nil

REFERENCES

1. Shirin Hamed-Azzam1,2, MD; Islam AlHashash2, MD; Daniel Briscoe2, MD; Geoffrey E Rose1, DSc, FRCOphth David H. Verity1,2, MD, MA, FRCOphth J Ophthalmic Vis Res 2018; 13 (2): 175–182.
2. Lee S, Yen MT. Management of preseptal and orbital cellulitis. Saudi J Ophthalmol 2011;25:21-29.
3. Harris GJ. Subperiosteal abscess of the orbit. Age as a factor in the bacteriology and response to treatment. Ophthalmology 1994;101(3):585-95.
4. Basic and Clinical Science Course 2019-2020: Pediatric Ophthalmology and Strabismus. San Francisco, CA: American Academy of Ophthalmology; 2019.
5. Liao, S., Durand, M. L., & Cunningham, M. J. (2010). Sinogenic orbital and subperiosteal abscesses: Microbiology and methicillin-resistant Staphylococcus aureus incidence. Otolaryngology–Head and Neck Surgery, 143(3), 392–396.

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[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. J Oral Pathol Med 2006; 35: 540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, *et al.* Caries-preventive effect of fluoride toothpaste: A systematic review. Acta Odontol Scand 2003; 61: 347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antisepsis. State of the art. Dermatology 1997; 195 Suppl 2: 3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. J Periodontol 2000; 71: 1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2006.

Personal Author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovuo J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O,

Kidd EAM, editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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