

PEDIATRIC MICROBIAL KERATITIS: PRESENTATION AND OUTCOME IN A TERTIARY EYE CARE CENTER IN EGYPT

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Introduction

Microbial keratitis in children is a serious, vision-threatening condition associated with a high incidence of amblyopia. Children differ from adults in many ways, including difficulty in patient examination, level of inflammation, difficulty in administering topical medications, and risk of amblyopia. Many clinicians tend to treat empirically, without initially collecting cultures, whereas such laboratory investigations prior to treatment remain the standard of care at hospitals and University Medical Centers. There are large regional differences in the relative prevalence of the causative organisms determined by climate and socio-economic factors. Based on the etiological agent, keratitis can be classified as: bacterial Keratitis, viral, protozoal, fungal, parasitic, and keratitis by O myocytes. Treating microbial keratitis aim at eradicating the microbial agent and moderating the host immune response with corticosteroids to reduce the scarring while minimizing potential visual impairments. Most ulcers, those occurring in children below 3 years, are successfully treated with topical therapy alone.

(Examination: Slit-lamp bio microscopy, evaluation of visual acuity if possible).
(Laboratory Evaluation: Sampling Technique was Impression Smears and corneal Scraping. Staining and Culture Techniques: Blood, Chocolate blood, Sabouraud's dextrose, and MacConkey's agar. Antibiotic Sensitivity Testing) and finally (Follow up).

Results

The study included 33 children. Plant trauma was the most important risk factor, culture was done for 11 cases. Diagnosis of cases were fungal 31% Bacterial 43% viral 22% acanthamoeba 4%.

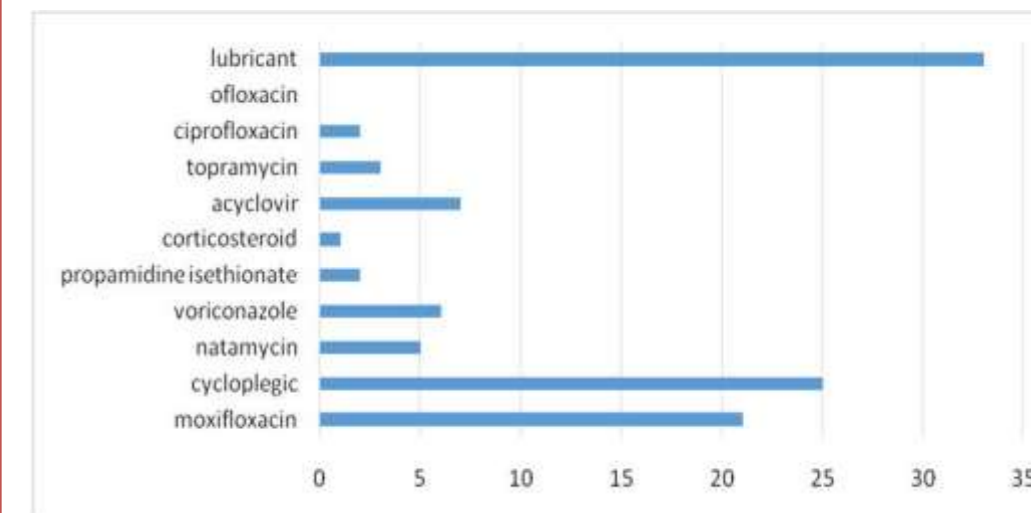


Figure 2: Distribution of the studied cases according to treatment (n = 33)

Aim of the Work

The aim of this study was to assess risk factors for pediatric microbial keratitis and to describe the clinical picture, microbial spectrum, treatment modalities, post treatment sequelae, and visual outcome in a tertiary care center in Egypt.

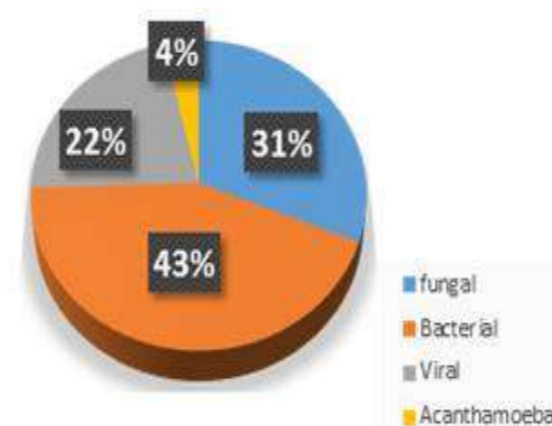


Figure 1: Distribution of the studied cases according to diagnosis (n = 33)

Table 1: Distribution of the studied cases according to investigation (n = 33)

Investigation	No.	%
No C&S done	22	66.7
C&S done	11	33.3
Organism		
No growth	3	27.3
Pseudomonas	3	27.3
Klebsiella	1	9.1
Staphylococcus eipermides	1	9.1
Staphylococcus aureus	1	9.1
Acanthamoeba	2	18.2

Table 2: Distribution of the studied cases according to the risk factor (n = 33)

Risk factor	No.	%
Plant trauma	11	33.3
Contact lens	10	30.3
Fingernail penetrating	2	6.1
Fever	7	21.2
Trauma by cement	1	3.0
Trauma by toy	1	3.0
Blunt trauma	1	3.0

Conclusion

The clinical diagnosis can be sufficient in most cases specially that the facilities for doing culture and sensitivity may not be available in many primary care centers, no need for culture to all cases. Trauma by plant or fingernail or a contact lens (CL) wear, are important risk factors. The majority of cases occurred within (10≥15) age group due to the excessive activity in this age group as this age group is closer to adulthood. Broad spectrum antibiotics are efficient good treatment.

Patients and Methods

The study was conducted as a prospective study to assess presentation and outcome of microbial keratitis in a tertiary eye care center in Egypt. In the pediatric age group. The study was conducted over a period of one year starting from July 2020 to July 2021. Inclusion criteria: Children below the age of 18 years, presented with microbial keratitis caused by viral, bacterial, fungal or acanthamoeba. Exclusion criteria: Patient with prior ocular surgery and patient with associated ocular morbidity such as glaucoma or uveitis.

Methods: All the patients were subjected to the following: (History-Taking: Age, gender, possible risk factors, previous ocular diseases, contact lens wear, drugs, presenting complaint and pain intensity).



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