

A GENTLE MEDICAL TREATMENT FOR ACANTHAMOEBA KERATITIS

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Abstract

INTRODUCTION

Nowadays there is not, a specific and satisfactory treatment for Acanthamoeba keratitis (AK). Aminoglucoisides (Neomicin) was de first drug used in the medical AK treatment, imidazoles and triazols (Itraconazole) associated to debridement are used too for the treatment in the decade of 80 (1), we add to medical treatment a new topical aminoglucoiside Netilmicin 0.3% in ophthalmic droops and oral itraconazole at regular dose 100 mgs/ 12 hs.

AIMS

The description of a gentle, low cost and available in México, medical treatment for AK, in cases with an early diagnosis.

PATIENTS AND METHODS

We describe two cases of early clinical and culture proven diagnostic of AK, in two young females, in one case with the infection in both corneas (three eyes in total), treated with topic droops of Netilmicin 0.3% (Netira SCIFI Laboratory Italy), two droops each two hours during 48 hours (day and night) and Itraconazole (Nizoral Jenssen laboratory Netherlands) by mouth 100 mgs/12 hs / 15-30 days. After the first 48 hours, the droops of Netilmicin, was administered 4 times a day, for the time as was needed until a healed cornea was achieved (3 to 4 months).

RESULTS

The 3 Acanthamoeba strains was obtained from cornea scrap cultures, and identified; A royreba (T4) in case 1 (in both eyes), and Acanthamoeba castellanii in case 2. The Acanthamoeba cultures for diagnosis, where made in NNA with a layer of live Enterobacter aerogenes. Table No 1 shows the summary of clinical records and evolution.

Case	CL user	Ocular pain	Diagnosis	Perineural infiltrate	Stroma ring	Surgery	Acanthamoeba	Healed FVA
Case 1								
OD	+	+	Superficial AK	+	No	No	T4 A royreba	+ 20/20
OS	+	+	Superficial AK	+	No	No	T4 A royreba	+ 20/20
Case 2								
Case 2	+	+	Cornea ulcer	No	+	No	A castellanii	+ 20/20

CONCLUSION

In countries where there are not the classic drugs suggested for the treatment of AK, we need to look for others alternatives in the medical treatment with the best results for the patient in cases of AK. This new treatment was proven in two patients with early AK diagnosis.

BIBLIOGRAPHY

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2. Lorenzo –Morales J, Khan NA, et al. Parasite. 2015; 22,10



Figure 1



Figure 2



Figure 3



Figure 4

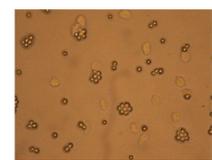


Figure 5

Case No 1 OD (Right eye)

Case No 1. Female 19 years old, living in Mexico City, contact lens user, she observed low visual acuity in both eyes, one week before. She was attended at Hospital Asociación para Evitar la Ceguera En México “Dr Luis Sanchez Bulnes” in Cornea Service, at slit lamp examination In both eyes was observed superficial keratitis. In OD cornea was haze, and presented a mild keratitis. In her first consultation, at silt lamp examination were observed in OD epithelial edema and perineural infiltrate in temporal inferior quadrant, (Figure 1), 30 days after medical treatment described above, she presented a little inflammatory ring and perineural infiltrate in the same site described before (Figure 2), 42 days after there was observed haze in paracentral corneal, and vascularization, total superficial epithelization of cornea surface, and no pain.

In the first consultation samples was taken from both corneas with scrapes, for bacteria, fungus and Acanthamoeba. Laboratory report: Cultures Positive for Acanthamoeba royreba in both corneas samples, and both contact lens samples. Culture negative for bacteria in OS, Stenotrophomonas maltophilia in the OD cornea sample and contact lens.

Case 1 OS (left eye)

In OS at slit lamp examination; was observed conjunctiva hyperemic, central cornea stroma opacity, and diffuse perineural infiltrate (Figure 3). It was diagnosed as OS Herpes simplex keratitis, that was unresponsive to regular Aciclovir treatment.

After 15 days of first consultation; in cornea persisted the perineural infiltrate and diffuse epithelial fluorescein staining ulcer. 40 days after medical treatment described, and in her 3th consultation the patient showed no cornea ulcer in OS, inflammatory reaction diminished and mild perineuritis (Figure 4).

After the laboratory results she received topical eye drops netilmicin 0.3% (SCIFI labs. Sicilia Italia) in both eyes and itraconazole 100 mgs tablet each 12 hs taken by mouth during 15 days.

Final best corrected visual acuity 20/25 OD and 20/50 OS, perineural infiltrate on left eye continues but is diminished, 3 months later. Best corrected visual acuity 20/20 on both eyes, and haze on OD temporal cornea. Acanthamoeba royreba culture (Figure 5) in non nutrient Agar (NNA) with live E aerogenes layer, throphozoites and cist obtained from corneas scrapes (case 1). (Magnification 10x40 light microscop Zeiss)



Figure 6

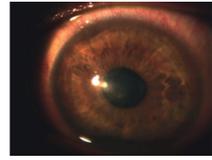


Figure 7

Case No 2 OS (left eye)

Female patient 38 years old. From Mexico City, contact lens wearer because high miopía, she was attended at Hospital Asociación para Evitar la Ceguera En México “Dr Luis Sanchez Bulnes” in Cornea Service because intense pain en OS.

OS Visual acuity; Count Fingers 50 cms (.) 20/200, with midesopsies and photopsies. At slit lamp: Central cornea ulcer 3.5x3.5mm, edema, 1mm hypopyon, immune ring, (figure 6). The culture scrap samples yielded Acanthamoeba castellanii, negative for bacteria and fungus.

After the laboratory results she received topical eye drops netilmicin 0.3% (SCIFI labs. Sicilia Italia) and itraconazole 100 mgs tablet each 12 hs taken by mouth during 15 days, and TP (tropicamide/phenylephrine) one droop each hour during 48 hs. 15 days after the patient refer no pain and was no observed hypopyon. After 30 days was observed favorable evolution and was administered polymyxin 0.3% topic droops each 2 hours, for maintenance treatment. Finally 6 months later cornea ulcer was healed (figure 7), deep vascularization in inferior quadrant and central mild leucoma. FVA: CF 30 cm (.) 20/400