MANAGEMENT OF MOOREN'S ULCER AND VISUAL OUTCOME IN JOS UNIVERSITY TEACHING HOSPITAL-CENTRAL NIGERIA

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Abstract

Background
Mooren's Ulcer is a chronic painful Ulceration of the cornea, with a steep overhanging edge and may progress centrally or circumferentially to involve the whole cornea, often resulting in blindness.

Aim: To review the visual outcome of Mooren's ulcer patients managed using conjunctivectomy with systemic and topical steroids in Jos University Teaching Hospital with the aim of optimizing management.

Methods
Case notes of patients managed in the last 5 years in Jos University teaching hospital were reviewed to ascertain the visual outcome. The folders of 19 of the 26 patients who attended the clinic were reviewed. Information on age, sex, presenting complaints, drugs used before and after presentation, examination, treatment given in JUTH and visual outcome

Results
The mean age at presentation was 27.7 years. Both sexes were found to be equally affected. Four (21.1%) patients had both eyes affected, 16 (66.3%) patients had used traditional eye medicines before and after presentation. Fifteen (65.2%) eyes had both medical and surgical interventions, while 8(34.8%) eyes were treated with topical and systemic steroids only. Five (21.7%) eyes had visual acuity between 6/6 to 6/18, while 3 (13.0%) eyes had visual acuity of 6/24 to 6/60. Two (8.7%) eyes had visual acuity of worse than 6/60. The final visual acuity of 13 (56.5%) eyes could not be tested after treatment because the patients were lost to follow up.

Conclusion
Though several studies have shown that systemic immunosuppressive chemotherapy has been found to be superior to local ocular care, such as conjunctivectomy and topical steroids, we have found that patients who did not use traditional eye medicines or indulge in self medication did well on conjunctivectomy with systemic and topical steroids.

Introduction
Mooren's ulcer was first described by Bowman in 1849 and soon thereafter by McKenzie as "chronic serpiginous" ulcer of the cornea or ulcus rodents[1], but Mooren was the first to publish the several cases of this condition in 1863[1]. Mooren's ulcer is a chronic painful ulceration of the cornea with a steep, over-hanging central and leading edge that starts in the periphery. If untreated may progress centrally or circumferentially to involve the entire cornea often resulting in blindness[2]. It is associated with autoimmune problems in some but not all the patients[3]. The West African type of the ulcus rodents is different in that it has a higher prevalence, and a tendency towards perforation, and is most frequently in the age group 20-40 years[4]. The disease may be unilateral or bilateral and may progress to involve the entire cornea resulting

in severe visual loss[5].

In most instances, treatment with immunosuppression is beneficial; however many cases are refractory to treatment. Some response occurs with interferon in patients with hepatitis C and Mooren's ulcer[6,7], while others believe that due to the cost of interferon, high doses of intravenous steroids could give good therapeutic responses[8]. Other studies have shown that systemic immunosuppressive chemotherapy is superior to local ocular care such as conjunctivectomy and topical steroids which may eventually lead to recurrence[9]. The aim of this study is to review the management of Mooren's ulcer in JUTH, and compare with management of similar conditions elsewhere with the view to improving on our case management.

Patients and Methods

Cases of patients treated with Moorens ulcer over a period of 5yrs (2000-2005) were retrieved, and reviewed. Folders of 19 out of the 26 patients who attended the eye clinic were perused and information on age, sex, hospital number and presenting complaints were obtained. Details of examination, and treatment given in JUTH and visual outcome were obtained, and presented in tables and a figure.

RESULTS

Twenty-six patients were seen during the study period but only the case notes of 19 patients were retrieved. Some of these patients presented with the disease in both eyes hence 23 eyes were seen and treated.

Table 1 shows the age and sex distribution of the disease. Of the 19 patients records reviewed, 11 were males while 8 were females giving a male to female ratio of 1.3 to 1. The youngest patient affected was a 13 year old female with the disease in both eyes. The mean age was 27.7 years. The age group mostly affected were those between 21-30 years among the males, while among the females were those between 13-20 years.

Figure I

This figure shows treatment given to patients in JUTH. Eight (34.8%) of eyes affected were treated with drugs only, i.e. both systemic and topical while 15 (65.2%) eyes had both medical and surgical interventions.

Table 2 shows the visual outcome of the 23 eyes after treatment. Eleven (47.8%) eyes presented with visual acuity of 6/6 to 6/18, while three (13.0%) had Visual acuity of 6/24 to 6/60. Seven (30.4%) presented with visual acuity worse than 6/60.The pre-treatment visual acuity of two (8.7%) eyes were not documented.

Five (21.7%) had post-treatment Visual acuity of 6/6 to 6/18, while three (13.0%) had visual acuity of 6/24-6/60. Two (8.7%) eyes had post-treatment visual acuity worse than 6/60.thirteen (56.5%) of the eyes could not be tested because the patients were lost to follow up.

Table 1: Age and Sex distribution

Age (Years)	Male	Females	Total
0-10	0	0	0
11-20	2	4	6
21-30	8	2	10
31-40	0	1	1
41-50	0	0	0
51-60	0	1	1
61-70year	0	0	0
>70year	1	0	1
TOTAL	11	8	19

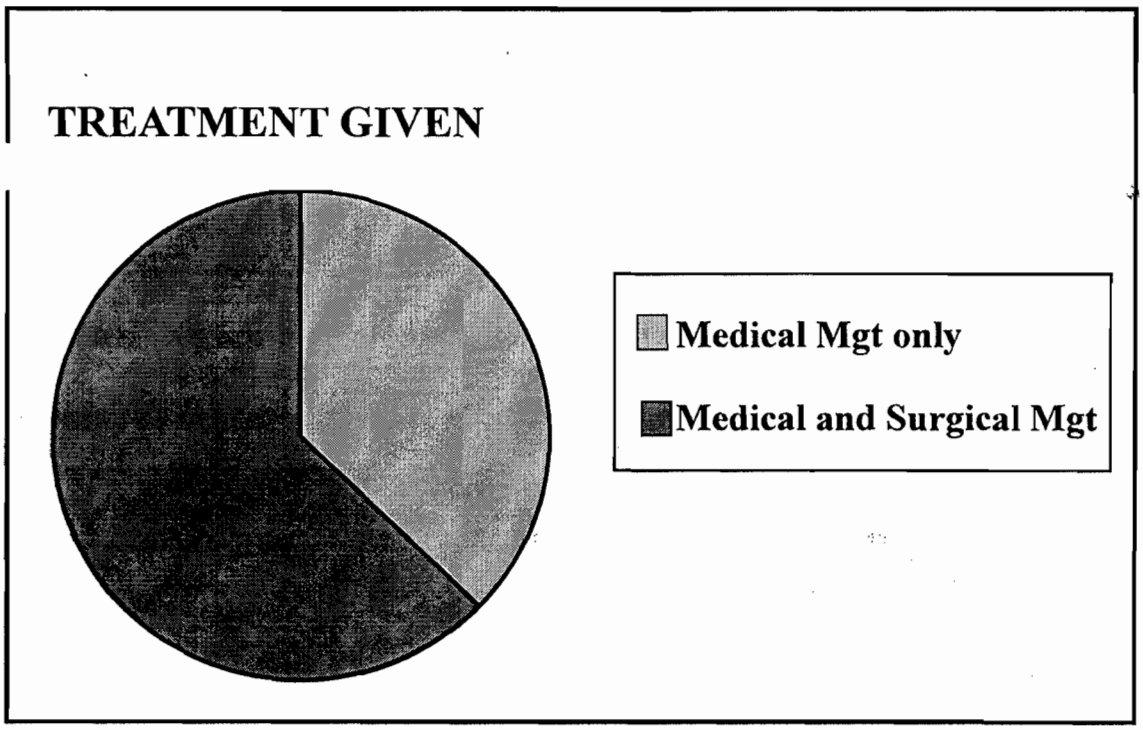

Figure 1: Treatment given to the patients

Table 2: Visual out-come in 23 eyes after treatment

Visual acuity	Presentation	post-treatment
6/6	3	1
6/9	5	1
6/12	1	1
6/18	2	2
6/24	2	2
6/36	0	0
6/60	1	1
<6/60	7	2
Not done	2	13(lost to FU)
Total	**23**	**23**

DISCUSSION

Mooren's ulcer is strictly a peripheral ulcerative keratitis, which occurs completely in absence of any diagnosable systemic disorder that could be responsible for the progressive destruction of the cornea[10]. The disease has been classified into type 1 seen in patients above 35 years and which is said to be benign, and type II seen in patients below 35yrs and this is said to be malignant[1].

In this study cases of 19 patients were reviewed, 11 males (57.89%) while 8 (42.11%) were females given a ratio of 1.3:1 ratio. This is in agreement with the study by Chen, Xie et al that the disease has no significant sex predilection. The youngest individual in this study was a 13 year old female child, while the oldest was an 80 year old female. The mean age was 27.7 years.

Management of these patients was quite

difficult as 14 (73.68%) of the 19 patients had either started treatment elsewhere with orthodox drugs or traditional medicine or both before and after presenting to the eye clinic. This confirms the attitude of the average African as confirmed by Wade and Malu[10] where treatment was sought elsewhere from non- specialists and traditional healers before presenting to the specialist. One of the patients had presented to the clinic with the disease in both eyes with a vision of 6/24. After treatment with medication only, vision improved to 6/9 in the right eye and 6/12 in left eye. The patient later used traditional eye medicine, but reported to the clinic with a vision of counting fingers in both eyes and severe corneal ulceration with perforation in the right eye.

The diagnosis of Mooren's ulcer was clinical. No specimen from the excised conjunctival tissues was sent for histology. Studies done by Majekudunmi in Lagos and Kalogeropoulos et al [11, 12] showed the presence of lymphocytes and plasma cells in the specimens sent for histology, suggestive of an autoimmune disease. Eight eyes were treated with both systemic and topical drugs only. These were prednisolone, atropine and antibiotic, while 15 eyes had various types of surgery such as conjunctivectomy, cryoapplication and cauterization along with medication. One of the patients, a young man of 27 years had conjunctivectomy four times, but healed with a visual acuity of 6/9.

Patients whose conditions were unresponsive to medication only, had surgical intervention; however those who have also had the disease and were receiving treatment elsewhere without improvement had conjunctivectomy immediately along with systemic and topical medications. No patient was placed on immunosuppressive drugs and none also was placed on interferon alpha 2b which has been shown to be effective in patients with concomitant Hepatitis C infection from other studies.[6,7]

The visual acuity of only ten eyes could be recorded as most patients were lost to follow up. This could be due to one of several reasons:

- Patients' discouragement with several hospital visits. In most developing countries, the high demand for services and man power often makes this a huge problem[13]
- dissatisfaction with treatment
- Improvement with treatment.

The management of the disease requires patience both from the care provider and the patients as it takes about 2-6 months[1, 5] for a complete healing to occur.

CONCLUSION

- This work has shown that probably a more aggressive approach should be given to patients with Mooren's ulcer by adding immunosuppressive drugs because of the overall poor outcome from both medical and surgical management.

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