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Original article

Epidemiological, clinical and therapeutic aspects of edematous maculopathies in Cadeso/Donka

Aspects épidémiologiques, cliniques et thérapeutiques des maculopathies œdémateuses au Cadeso /Donka

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Résumé

Objectif : Etudier les aspects épidémiologique, clinique et thérapeutique de la maculopathie œdémateuse au CADES/O.

Méthodologie : Il s'agissait d'une étude transversale de type descriptif d'une durée de six (6) mois allant du 1er avril 2021 au 30 septembre 2021 Ont été inclus dans notre étude, tous les patients atteints de la maculopathie œdémateuse sans distinction et ayant réalisé au moins une angiographie et/ou une tomographie en cohérence optique (OCT).

Résultats : Au cours de notre étude nous avons reçu 4988 patients dont 180 soit 3,6% avaient des maculopathies œdémateuse. La tranche d'âge de 60 à 69 ans (30,5%) était le plus représenté. L'âge moyen était de 55,9± 14,2 ans (20 et 89 ans). Le sexe féminin (55%) était prédominant avec un sex-ratio de 0,8. La majorité de nos patients était des ménagères (35,5%). 83% de nos patients provenaient de zone rurale. Plus de la moitié de nos patients était des mariés soit une fréquence de 74,4%. L'HTA était le principale ATCD (67,7%) suivi de la dégénérescence maculaire liée à l'âge (66,6%) et diabète (32, 2%). Le principal motif de consultation était le flou visuel (88,3% %). L'OCT a retrouvé un œdème maculaire non cystoïde et un œdème maculaire cystoïde. Selon la classification ALFEDIAM, l'OM était principalement mixte (45%), diffus (36,1%) et focal (18,8%).

92,2% de nos patients ont reçu un traitement à base d'anti VEGF, l'évolution était favorable.

Conclusion : L'OM est dû à une perte de l'homéostasie rétinienne conduisant à un déséquilibre entre entrées et sorties des fluides et à une conductivité hydraulique rétinienne altérée. Au cours de notre étude la prévalence maculopathies œdémateuses était faibles. Les personnes âgées de sexe féminin ont étés les plus touchés.

Le cout de la prise en charge de la maculopathie œdémateuse doit être revu à la portée des patients à revenu faible pour permettre une prise en charge adéquat.

Mots-clés : Maculopathie œdémateuse, épidémiologie, clinique, thérapeutique.

Abstract

Objective: To study the epidemiological, clinical and therapeutic aspects of edematous maculopathy at CADES/O.

Methodology: This was a descriptive cross-sectional study lasting six (6) months from April 1, 2021 to September 30, 2021 All patients with oedematous maculopathy without distinction and who had undergone at least one angiogram and/or optical coherence tomography (OCT) were included in our study.

Results: During our study we received 4988 patients, of whom 180 or 3.6% had edematous maculopathies. The age group from 60 to 69 years old (30.5%) was the most represented. The mean age was 55.9± 14.2 years (20 and 89 years). Females (55%) were predominant with a sex ratio of 0.8. The majority of our patients were housewives (35.5%). 83% of our patients came from rural areas. More than half of our patients were married, a frequency of 74.4%. Hypertension was the leading cause of ATCD (67.7%) followed by age-related macular degeneration (66.6%) and diabetes (32.2%). The main reason for consultation was blurred vision (88.3%). OCT found non-cystoid macular edema and cystoid macular edema. According to the ALFEDIAM classification, OM was mainly mixed (45%), diffuse (36.1%) and focal (18.8%).

92.2% of our patients received anti-VEGF-based treatment, the evolution was favorable.

Conclusion: OM is due to a loss of retinal homeostasis leading to an imbalance between fluid inputs and outputs and to altered retinal hydraulic conductivity. During our study, the prevalence of edematous maculopathies was low. Older women have been the most affected.

The cost of managing edematous maculopathy should be reviewed within the reach of low-income patients to allow for adequate management.

Keywords: Oedematous maculopathy, epidemiology, clinical, therapeutic.

Introduction

Macular edema (MO) or edematous maculopathy is a macular thickening related to an accumulation of fluid and protein in the retinal tissue[1]. Its diagnostic and therapeutic management is essential to reduce morbidity. The prevalence of macular edema is mainly related to the duration of diabetes, but also to the severity of diabetic retinopathy.[2] Globally More than 10 million patients with diabetic retinopathy or vein obstructions have macular edema.[3] In France, it is estimated that there are about 40,000 new cases per year.[1] In the United States, in diabetics of European descent, the prevalence of macular edema was about 5% in the 1990s, which was lower than the prevalences reported in the 1980s (about 10% in the Wisconsin Epidemiologic Study of Diabetic Retinopathy).[4] A high prevalence of macular edema has also been reported in West Indians in Barbados [4]. However, there are no reliable data on the prevalence of edematous maculopathy or macular edema in Africa.

Given the rarity of previous studies in Guinea and the place of edematous maculopathy in the management of patients with chronic eye damage are the reasons for the study of edematous maculopathies at CADES/O Donka.

Methodology

Study setting: The Centre for the Application of the Diploma of Specialized Studies in Ophthalmology (CADES/O) of the Donka National Hospital served as a framework for us to carry out this study.

Inclusion criteria:

All patients with oedematous maculopathy were included in our study without distinction who had at least one angiography and/or optical coherence tomography (OCT), cataracts were operated on and then OCT performed afterwards with acceptance.

Criteria for non-inclusion:

Patients with other conditions who did not agree to participate in the study were not included.

Study variables:

Our variables were quantitative and qualitative. Data were collected from patients with a visual impairment, a complete record who agreed to participate in the study with fundus examination and/or OCT.

Results

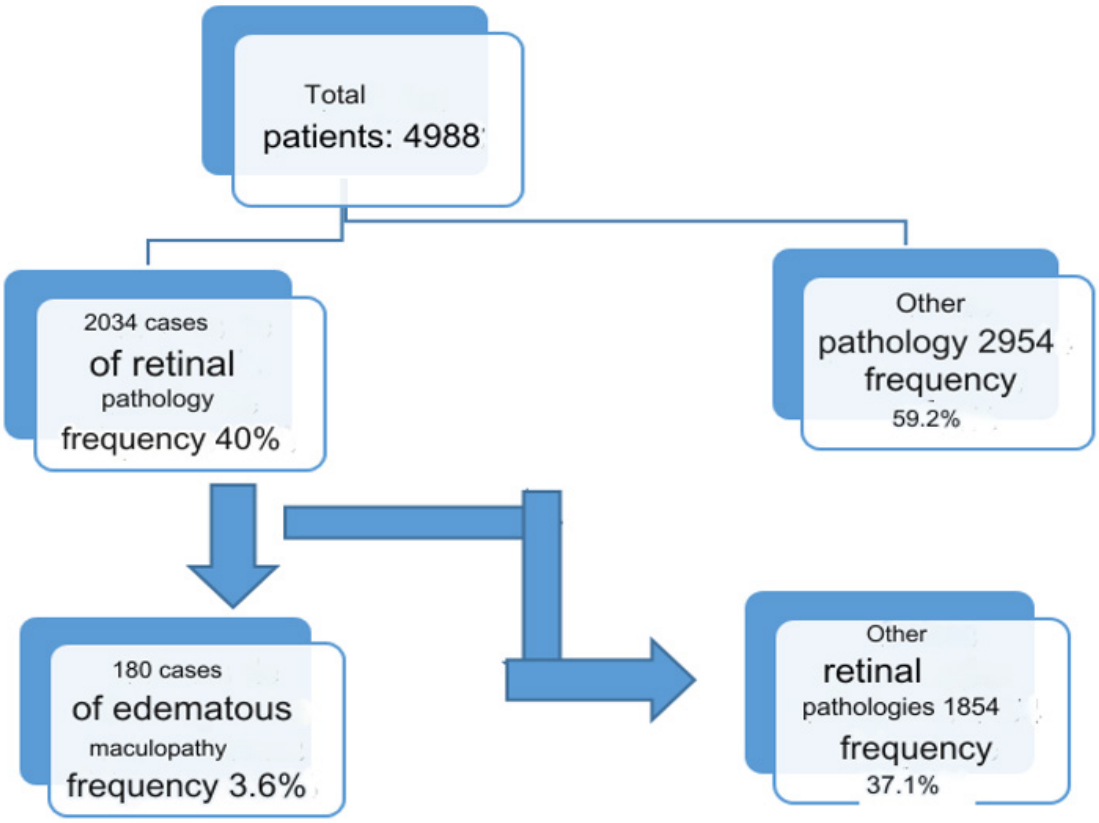
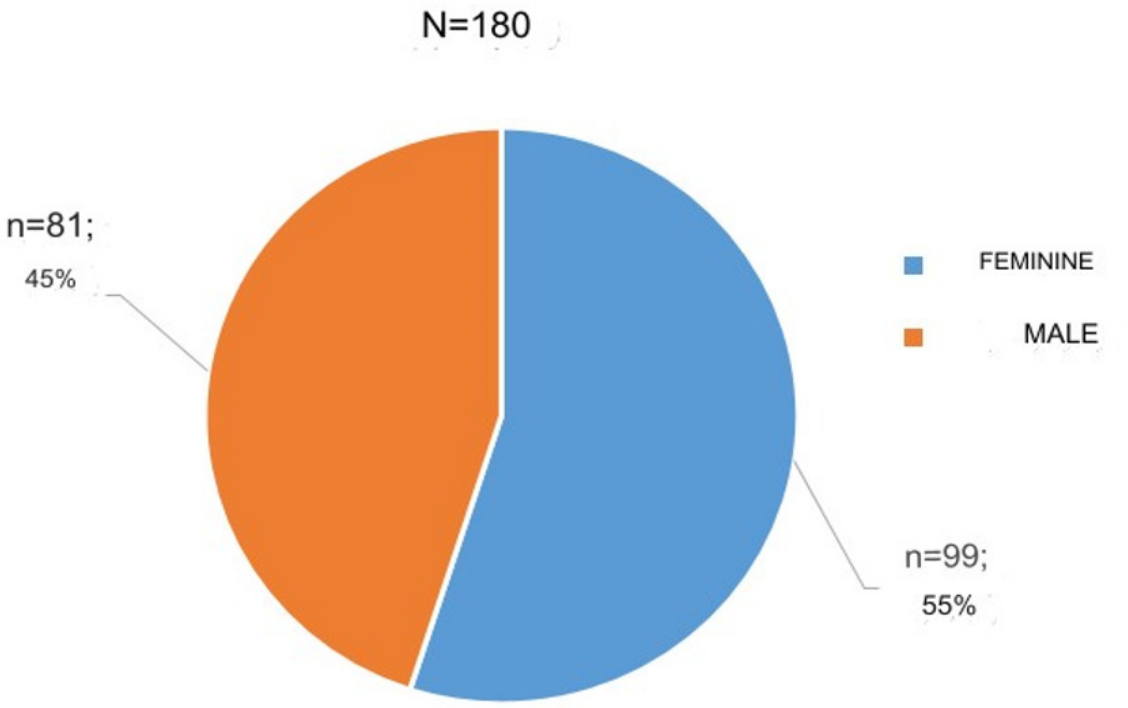


Figure 1: Flow diagram of patients received at the CADES/O in Donka from 1 April 2021 to 30 September 2021.

Table I: Distribution of the 180 patients with macular edema from April 1st to 30th September 2021 at CADES/O by age

Ages	Frequency	Percentage
20 to 29 years old	9	5,0
30 to 39 years old	13	7,2
40 to 49 years old	30	16,6
50 to 59 years	46	25,5
60 to 69 years old	55	30,5
70 to 79 years old	21	11,6
80 years and over	6	3,3
Total	180	100

Extremes: 20 and 89 years Average age: 55.97±14.28 years



Sex ratio (M/F) = 0.8

Figure 2: Distribution of the 180 patients with macular edema from April 1 to September 30, 2021 at CADES/O by sex

Table II: Distribution of the 180 patients with macular edema from April 1 to September 30, 2021 at the CADES/O according to the general ATCD

ATCD General	Workforce (n=180)	Percentage
HTA	122	67,7
Diabetes	58	32,2
Total	180	100

Table III: Distribution of the 180 patients with macular edema from 1 April to 30 September 2021 at CADES/O according to the reasons for consultations

Reasons for consultation	Workforce (n=180)	Percentage
Visual blur	159	88,3
Difficulty reading	14	7,7
Metamorphopsis	12	6,6
Eye pain	77	42,7
Tearing	33	18,3
Micropsy	12	6,6
Colour vision disorder	16	8,8

Table IV: Distribution of the 180 patients with macular edema from April 1 to September 30, 2021 at CADES/O according to fundus examination after maximum dilation (right eye)

FO (right eye)	Staff	Percentage
Fluid thickening near the macula	77	42,7
Fluid thickening in the center of the macula	56	31,1
Discreet thickening away from the macula	18	10
Normal	7	3 ,7
Inaccessible	22	12,2
Total	180	100

Table V: Distribution of the 180 patients with macular edema from April 1 to September 30, 2021 at CADES/O according to fundus examination after maximum dilation (left eye).

FO: (left eye)	Staff	Percentage
Fluid thickening near the macula	81	45
Fluid thickening in the center of the macula	72	40
Discreet thickening away from the macula	7	3,8
Normal	11	6,1
Inaccessible	9	5
Total	180	100

Table VI: Distribution of the 180 patients with macular edema from April 1 to September 30, 2021 at CADES/O according to ALFADIAM

Classification according to ALFADIAM	Frequency	Percentage
Diffuse OM	65	36,1
OM focal	34	18,8
Mixed OM	81	45
Total	180	100

Table VII: Distribution of the 180 patients with macular edema from 1 April to 30 September 2021 at CADES/O According to AMERICAN ACADEMY

AMERICAN ACADEMY Classification	Frequency	Percentage
Minimal	7	3,8
Moderate	94	52,2
Severe	79	43,8
Total	180	100

Table VIII: Distribution of the 180 patients with macular edema from 1 April to 30 September 2021 at CADES/O based on OCT results

OCT	Staff	Percentages
Non-cystoid macular edema	78	43,3
Cycystoid macular edema	102	56,6
Total	180	100

Table IX: Distribution of the 180 patients with macular edema from April 1 to September 30, 2021 at CADES/O according to treatment.

Treatment	Staff	Percentages
NSAIDs	66	36,6
Corticoid	55	30,5
Analgesic	54	30
Hypotonics	6	3,3
Anti-VEGF(AVASTIN)	166	92,2
Bore	11	6,1
Other	34	18 ,8

Discussion

During our study, we collected 4988 patients and 180 (about 3.6%) had edematous maculopathy and received treatment; this low frequency of edematous maculopathy in our study could be explained by the high cost of paraclinical examinations which limited their performance. This result is similar to that of: Berkania Z et al [5] reported in its study in Algeria in 2014, a frequency of 8.7% of diabetic maculopathy, including 6.2% of early maculopathy and 2.5% of edematous maculopathy. Joner et al. [6] reported a prevalence of hard exudates of 8.1% [7] and Rubino et al. [8] reported a prevalence of edematous maculopathy of 2.2% [9]. CHELALA E et al. [10] reported in their study in Lebanon in 2015 that diabetic maculopathy was present in 13 patients or 10.9%. The low frequency of maculopathy in our study is explained by the fact that the majority of patients resort to traditional treatment. The age group of 60 to 69 years was the most represented with a frequency of 30.5% and the mean age was 55.9± 14.2 years with extremes of 20 and 89 years, This result is higher than that observed by Berkania Z et al [5] reported in its study in Algeria in 2014 that the most represented age group was that of 35 years and over with 9.6%. This is likely due to complications and degeneration from chronic diseases, including high blood pressure and diabetes.

Female patients were the most represented, with a sex ratio (F/M) of 0.8. Our data agree with those of Berkania Z et al [5] reported in his study in Algeria in 2014 a female predominance with a sex ratio of 1.15. The hypothesis was that women had more representation than men. The most frequent reason for consultation was blurred vision (88.3%). This is the central involvement of the eye during the disease in the literature.

Fundus examination was abnormal in the majority of cases in each eye. This is due to the age group studied.

The classification according to ALFEDIAM in our study, macular edema was mainly mixed in 45% of cases, diffuse in 36.1% cases and focal in 18.8% of cases. According to the AMERICAN ACADEMY classification, macular edema was moderate in the majority of cases, i.e. 52.2% of cases. Patients with macular edema according to the treatment in our study benefited from anti VEGF with a percentage of 92.2%. This could be explained by the fact that the administration of anti-VEGF remains the reference treatment for macular edema in the literature.

Conclusion

The epidemiological, clinical and therapeutic aspects of edematous maculopathy at Cades/o Donka, had a low prevalence with the most frequent reason for consultation and a reference examination the OCT, which required treatment by administration of anti-VEGF which is the reference with a cost that must be reviewed within the reach of our low-income patients for adequate management.

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Conflicts of interest : None

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