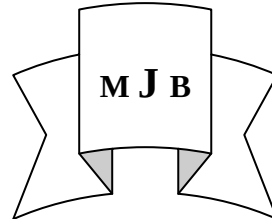


Dry Eye Syndrome in Hilla: A Pilot Study

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Abstract

This is an introductory pilot study for a more detailed one on the symptom profile of dry eye syndrome in Hilla. It aims at determining the approximate figure of prevalence of the condition as well as an attempt of finding its seasonal and age difference.

Patients and methods:

The patients are those attending the Ophthalmic Consultation Clinic in Hilla Teaching General Hospital after being examined by the same specialist; the case history and examination results were registered after the preliminary diagnosis.

The overall prevalence is 50.31%; it was the greatest in summer 67.07%, for the rest of seasons the difference in prevalence was not statistically significant (winter 50%, spring 48.24%, autumn 35.44%).

This very high prevalence points to the importance of making a detailed study of the symptom profile to clarify the clinical picture of the disease and its position in the differential diagnosis of a large number of ophthalmic diseases.

متلازمة جفاف العين في الحلة- دراسة أولية

الخلاصة

هذه الدراسة هي دراسة أولية للتقديم لدراسة مفصلة مطوّلة حول طيف العلامات المرضية لجفاف العين في الحلة. هدفها هو تحديد الرقم التقريبي لنسبة وقوع المرض و محاولة تبيان أختلاف وقوعه بالنسبة لفصول السنة وعمر المريض. المرضى هم مراجعوا العيادة الاستشارية للعيون في مستشفى الحلة التعليمي العام بعد فحصهم من قبل نفس الباحث، الذي يسجل التاريخ المرضي و نتائج الفحص بعد التشخيص الأولي.

نسبة الوقوع الأجمالية هي % ٥٠,٣١ ؛ كانت النسبة الأكثر في الصيف % ٦٧,٠٧؛ الفوارق في النسبة لباقي الفصول لم تكن محدّدة أحصائياً (الشتاء % ٥٠,٠ الربيع % ٤٨,٢٤، و الخريف % ٣٥,٤٤). كانت نسبة الوقوع تتناسب عموماً طردياً مع العمر. إن نسبة الوقوع العالية هذه تشير إلى أهمية وضع دراسة مفصلة لطيف الأعراض لتوضيح الصورة السريرية للمرض و موقعه في التشخيص التقريبي لعدد كبير من أمراض العيون.

Introduction

There can be no shred of doubt of the pandemic level of dry eye prevalence all over the world [1]. Its statistics are staggering and on the rise. In fact, they have doubled in the last 7 years [2]. The figure of prevalence has a great deal of variation among the huge amount of research carried out on the subject. In Iraq the

research on this vital subject is sparse and inadequate. This pilot study aims at having an idea about the approximate figure of prevalence of dry eye in an ophthalmic consultation clinic daily patients to help estimate the size of the problem in Iraq and whether it has a significant seasonal variation or age incidence.

Patients and Methods

I selected 4 days from the year 2006 as follows:

- 1- Wednesday 1st of February.
- 2- Wednesday 3rd of May.
- 3- Wednesday 2nd of August.
- 4- Wednesday 1st of November.

All patients attending the consultation clinic in these days were carefully diagnosed and those with the preliminary diagnosis of dry eye were isolated to take a detailed history and examination and the results were registered on a separate leaflet of paper for each patient including: name, age, occupation, sex, nationality, religion, chief complaint, duration, history of present illness and in particular augmenting and relieving factors. For the clinical examination I used mainly the slit lamp biomicroscope and the results were registered on the same

leaflet. The objective signs that were taken to indicate dry eye are:

- 1- The 2 tear strips are absent or are merely very thin interrupted light lines.
- 2- The lacrimal lake is dry or has an irregular blunt light sheen.
- 3- Debris of mucus and lipid on the corneal surface.
- 4- Ocular surface is dry and of light pink colour.
- 5- Filamentary keratitis with or without mucus plaques.
- 6- Thickening and keratinization of ocular surface.
- 7- Punctate epithelial erosions stained with fluoresceine.
- 8- Bittot's spot.

A suggestive history of at least 2 symptoms and at least 2 signs was taken to be a diagnosis and no grading of severity was followed.

Results

Table 1 Age, sex and dry eye cases in winter.

	<4		4-10		>10-20		>20-30		>30-40		>40-50		>50-60		>60		Total		Sum
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Pts	3	2	3	7	6	6	7	10	9	5	6	5	3	2	1	1	38	38	76
DE	0	0	1	2	2	2	4	4	7	4	3	3	2	2	1	1	20	18	38

Table 2 Age, sex and dry eye cases in spring.

	<4		4-10		>10-20		>20-30		>30-40		>40-50		>50-60		>60		Total		Sum
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Pts	2	4	2	10	7	2	9	9	10	8	3	6	5	3	3	2	41	44	85
DE	0	0	1	2	2	3	5	4	7	3	3	3	3	2	2	1	23	18	41

Table 3 Age, sex and dry eye cases in summer.

	<4		4-10		>10-20		>20-30		>30-40		>40-50		>50-60		>60		Total		Sum
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Pts	4	1	5	6	3	11	11	6	10	4	5	3	4	5	1	3	43	39	82
DE	0	0	2	4	3	4	6	5	8	4	4	3	3	4	3	2	29	26	55

Table 4 Age, sex and dry eye cases in autumn.

	<4		4-10		>10-20		>20-30		>30-40		>40-50		>50-60		>60		Total		Sum
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	
Pts	2	4	6	4	6	8	9	8	11	3	3	4	2	4	4	1	43	36	79
DE	0	0	1	1	1	2	4	3	6	2	2	2	1	1	1	1	16	12	28

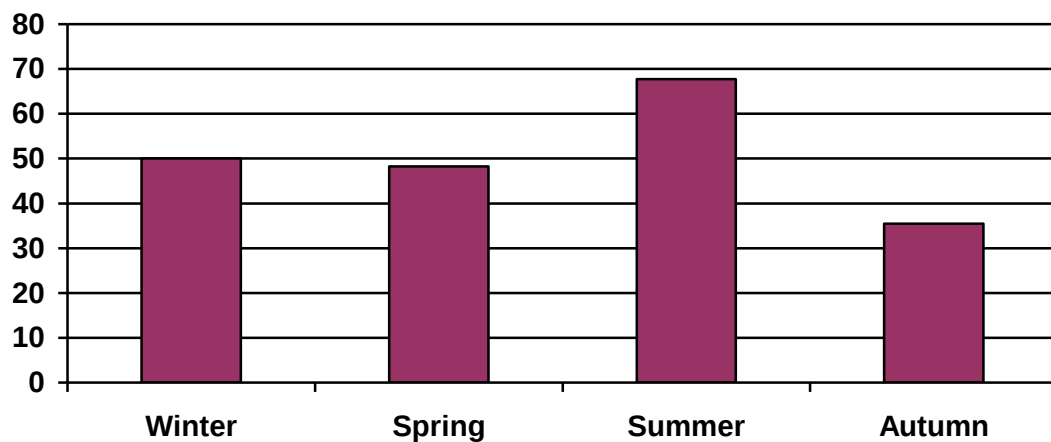


Figure 1 A histogram showing prevalence of dry eye in each season.

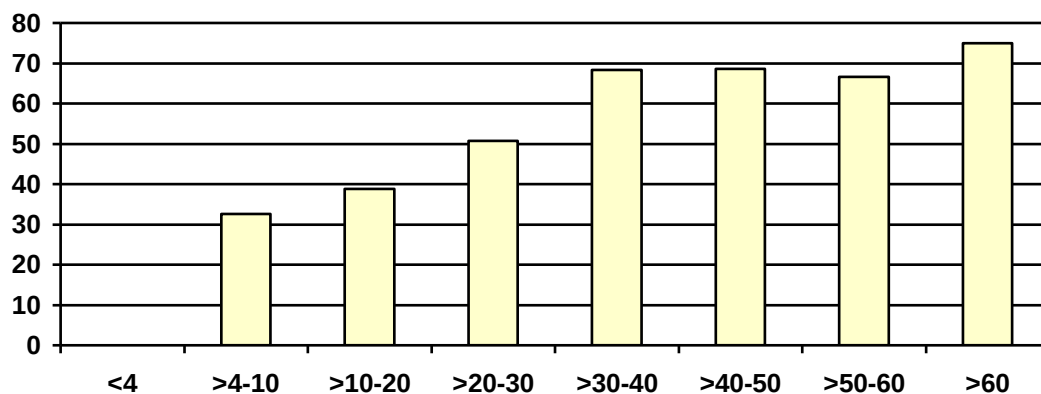


Figure 2 Prevalence of dry eye along age groups.

Discussion

Dry eye syndrome is associated with a measurable adverse impact on several common and important tasks of daily living, further implicating this condition as an important public health problem deserving increased attention and resources[3].

Previous studies on prevalence were either hospital based or population based. The prevalence in the hospital based group ranged from (14.5% - 43.6%)[4-8]; the population based, however, ranged from (2% - 34%)[9-14]. The cause of this great variation is legion and mainly due to sampling bias regarding age or sex. A study from Germany has found an overall prevalence of (5.2% - 63%)

[15]. The prevalence found in this study is outstanding. It is expected to find high prevalence of dry eye in Iraq due to its low relative humidity of its continental climate[16]. This study is also hospital based and hence does not directly reflect the community prevalence. It is cross-sectional too. The peak prevalence noted in summer is self explanatory. Iraq's summer is usually very severe, with peak temperatures that may reach up to (51 C°) and nil precipitation and (the shamal) brings extremely dry wind[17].

No statistically significant relation with sex was found in this study. Age has been universally a risk factor [18 - 23], and this was reflected in the

results, though a bit in an exaggerated form in the very old.

Conclusions

A prevalence of 50.31% means a major public health problem and dry eye in Iraq is more prevalent in summer and increases with age though children can also be involved.

Suggestions

Larger scale studies are recommended to:

- 1- Study the clinical features spectrum.
- 2- Study and establish new clinical features.
- 3- Establish a population based prevalence.
- 4- Study the possible risk factors in Iraq.
- 5- Study the relation of dry eye in Iraq to other conditions :

Vitamin A deficiency, meibomian gland dysfunction, atopy, collagen diseases, pterygium, conjunctival retention cysts, etc.

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