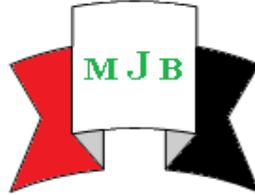


Epidemiological Study of Ocular Manifestation of Molluscum Contagiosum in Al Diwaniyah Governorate: Iraq

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Abstract

Background: Molluscum contagiosum is skin disease caused by the molluscum contagiosum virus (MC) usually causing one or multiple smaller dome shaped umbilicated papules with symptoms that maybe self-resolve. MC virus was once a disease primarily of children, but it has evolved to become a sexually transmitted disease in adults.

Objective: To study the epidemiology of ocular Molluscum contagiosum presentation in different age groups of Iraqi patients in Al-Diwaniyah city.

Method: This clinical descriptive study was performed in the outpatient department of dermatology and ophthalmology private clinic in Al-Diwaniyah from March 2012 – February 2013. A total of 245 Patients were recruited in this study as they diagnosed as ocular Molluscum contagiosum; both classical and non classical presentation were studied.

Results: the results showed that there is high incidence among young patients and this increase was much clear in male than female. The low socioeconomic state has also enhanced the occurrence of this virus.

Conclusion: Social risk factor for acquisition of ocular MC, particularly in suburban and low social economic area of Al Diwaniyah city is significant increased compared to the center of city. Sex and age might also enhance the occurrence of this virus.

Keywords: Molluscum contagiosum. Ocular, epidemiology, benign

الخلاصة:

تمت هذه الدراسة على وبائية فايروس الفالول اللؤلؤي في العيادة الخارجية لشعبة الامراض الجلدية في م. الديوانية التعليمي وكذلك عيادات العيون في الديوانية للفترة من شهر آذار لعام ٢٠١٢ الى شهر شباط لعام ٢٠١٣ على ٢٤٥ مريض مشمولين بهذه الدراسة حيث كانوا مصابين بفايروس الفالول اللؤلؤي في العين. وكانت النتائج تشير أن هناك نسبة عالية من المصابين هم من أعمار الشباب وتكون الإصابة بالذكور أكثر من الإناث وتبين في هذه الدراسة ان الحالة المعيشية والاقتصادية لها دور كبير في الإصابات بهذا الفايروس وان النسبة تكون عالية في الطبقات الفقيرة من المجتمع وكذلك تكون الإصابة عالية في المناطق الريفية مقارنة في مركز مدينة الديوانية.

Introduction

Molluscum contagiosum (MC) is a common and usually benign viral infection of the skin and eye caused by Molluscipox

virus, a member of the Poxviridae family. The virus was first demonstrated by Bateman in the beginning of the 19th Century, who also later assigned the name to it [1].

The virus is distinct from other poxviruses in that it causes spontaneously regressing, umbilicated tumors of the skin rather than pox like vesicular lesions. The virus is established worldwide with higher distribution in tropical countries. The disease is transmitted primarily through direct skin contact with an infected person, although fomites also have been suggested as another source of infection [2].

MC is also characterized by discrete single or multiple, flesh-colored papules. Lesions are classically pale, round, raised, painless skin nodules with umbilicated centres. They may be widespread though the virus commonly infects the face including the eyelid margin [3]. The total time-course of infection may be prolonged due to inadvertent autoinoculation of the virus to other parts of the body. Activities or circumstances that involve skin-to-skin contact (e.g., play, sports such as wrestling, sexual activity and swimming) have been associated with increased risk for infection [3].

Unfortunately Lesions may be not noticeable and in some cases are supposed to excrete virus onto the ocular surface. Chronic follicular conjunctivitis and corneal changes consisting of superior micropannus and fine epithelial keratitis may subsequently develop [4,5, 6]. Although MC as a clinical entity is well defined and commonly observed, few data regarding its epidemiology in the Iraqi population exist.

Because of the features appearance of MC lesions, judgment is usually made without laboratory testing. Frequently particular managements or treatments are not pursued for MC infection in immune competent persons, as it will resolve with time, however, mechanical removal (via curettage, cryotherapy, or laser treatment) and various topical therapies (including

tretinoin, cantharidin, Imiquimod, cidofovir) are sometimes utilized to minimize the duration that lesions are present, particularly on the face or on areas of the body that are subject to heightened irritation. Molluscum contagiosum in persons who have immune compromise whether due to HIV infection, immunosuppressive drug therapies, or other reasons can be complicated. In Baghdad, of 663 children included over the 6-month. It has been shown that 1.5% of children was with Molluscum contagiosum [7]. Maqdasiet.al. 2013 have demonstrated that there is an up surge in the incidence of MC in the last few years in Iraq. They also warranted that there is a need for periodic population based measurements to assess trends in incidence and health care utilization for Molluscum contagiosum infection in Iraq [8]. Our purpose was to collect epidemiologic data on people in Al Diwaniyah city in Iraq with ocular MC regarding to age, gender, degree of involvement, relation to pre-existing atopic dermatitis and immune status.

Patients And Method

The study was carried out in the outpatient department of dermatology and ophthalmology private clinic in from March 2012 – February 2013 in Al Diwaniyah city, Iraq. The recruitment population of 245 patients consisted of clinically newly diagnosed with ocular Molluscum contagiosum, who were seen in the Outpatient Department of the Ocular Infectious Disease from March, 2012 through February 2013. Patients were grouped according to age, 6 to 13 years old represented as group A, 14 to 20 years old was considered as group B, Group C represents 21-35, while group D patient who was older than 35 years old. The clinical presenting symptoms of systemic features, current medications, and visual

symptomatology were recorded on a detailed, printed questionnaire, including age, sex and area of living (urban or suburban) and education level was also recorded. A complete ophthalmic examination was performed, which included best-corrected visual acuity, external eye examination, ocular motility, papillary reflexes, anterior segment examination by slit-lamp biomicroscopy, dilated fundus examination by indirect ophthalmoscopy, and intraocular pressure measurement by non-contact

tonometry. Univariable analyses were performed with SPSS for Windows Version 9.01 (SPSS Inc., Chicago, USA). Chisquare tests were used to evaluate significant differences in proportion among groups. A p-value < 0.05 was considered statistically significant.

Results

1- Ocular Molluscum contagiosum-associated with age of patients

Table 1: distribution of patients according to age groups

6-13 years (group A)	14-20 years (group B)	21-35 years 21-36 (group C)	>35 years (group D)
91	69	47	38

In group A and B the incidence of ocular Molluscum contagiosum was significantly different from other groups. However no significant differences between group A and B.

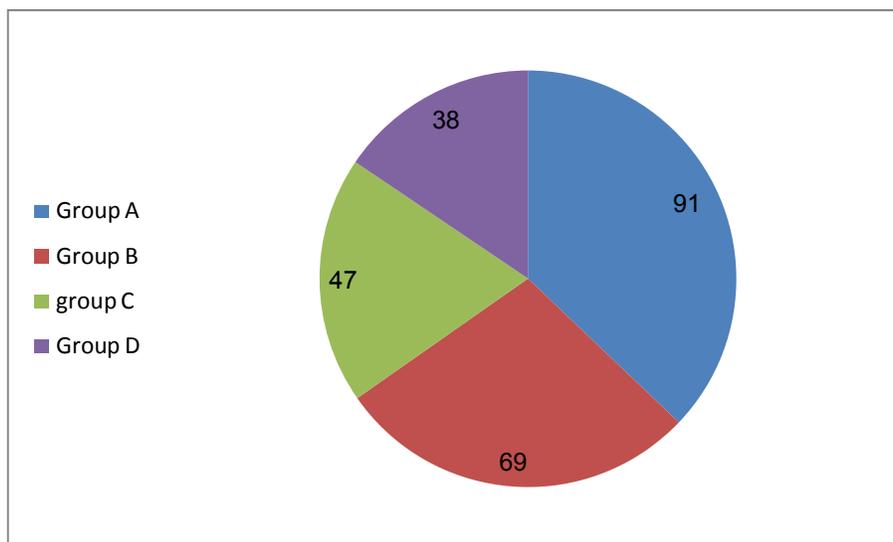


Figure 1: distribution of patients according to age group

2- Ocular Molluscum contagiosum-associated with sex of patient visits

Table 2: patient group distribution associated with sex

Sex	6-13 years (group A)	14-20 years (group B)	21-37 years 21-38 (group C)	>35 years (group D)	total
male	61	48	15	23	147
female	30	21	32	15	98

The incidence in male was clearly higher than female group.

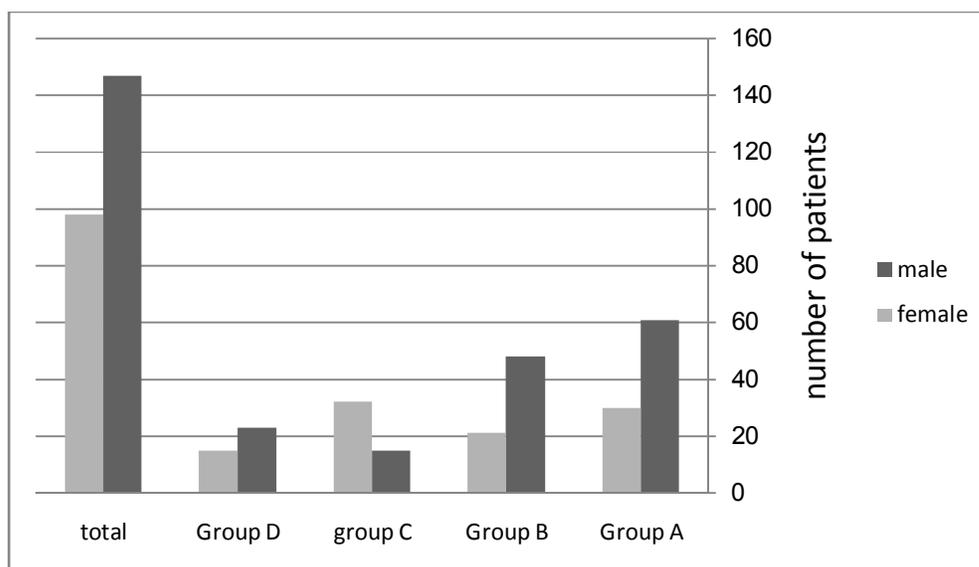


Figure 2: patient group distribution associated with sex

3- Socioeconomic state

Table 3: socioeconomic distribution

There was high incidence of the virus in low socioeconomic group than high socioeconomic one.

High socioeconomic state	84
Low socioeconomic state	161

4- Distribution of patient to center and periphery of city

Table 4: distribution of patient in city

It was clearly that the virus distribute in the periphery of city than the center.

Center of al Diwaniyah	97
Periphery of al Diwaniyah	148

Discussion

Despite the ubiquity of Molluscum contagiosum virus throughout the world, few studies have addressed incidence trends or burden of infection associated with this virus especially with eye infections, and none that we know of have provided population-based rates to describe incidence or health care utilization in Iraq. MC is benign but nonetheless frequently troublesome viral infection that generally affects young children. It is characterized by smooth, dome shaped

discrete papules that occasionally develop surrounding areas of scale and erythema. Patients and families are bothered by this infection because of its often prolonged course, because it may persist for months to years. A subclinical carrier state of MC virus probably exists in many adults (9).

In Iraq, in last few years, there was increase in the incidence of ocular MC in compared with other dermatological infections which made a burden for doctors and patients at the same time;

this need to be investigated more trying to find the causes and to prevent further spread. On other hand, because MC as a viral skin infection is considered as very mild and harmless (other than it is contagious and cosmetically unacceptable) it is self-limiting and this is not an urge for immediate treatment; the viral load on the skin is large and this will be source of viral spread to contacts.

For the clinical presentation of MC, data were collected for the sex, age, site. Widespread and refractory molluscum on the face are seen most commonly in HIV disease and also with iatrogenic immune suppression (2). In otherwise healthy subjects occasional facial lesions are seen, particularly on the eyelids. Molluscum may affect the scalp, lips, tongue and buccal mucous membrane, and indeed any part of the body surface, including the soles where the appearance is atypical. The purpose of this study has been to provide a comprehensive view of epidemiology of MC across different age and sex as well as economic state in different parts of the of Al Diwaniyah city Iraq.

By utilizing the information collected from infected patient how had visited the outpatient clinic. Our findings point to a relatively high overall MC-associated outpatient visit rate in young population (group A and B). However, to the best of our knowledge there is no other previous study in Iraq to compare with this finding. Recent studies which measured age-related health care utilization for MC concluded that rates of health care utilization, and overall numbers of MC-associated visits were highest among children 2–5 years old [10,11]. To some degree these studies was matched our finding. Formerly, onset of schooling was typically viewed as a social risk factor for acquisition of MC, particularly in developed, affluent nations [12]; a study performed in

Holland in the late 1980s provided evidence consistent with this idea [13]. In addition to high overall incidence, in this study, we noted relatively high incidence among specific population sub-groups, notably male group compare to female one. We also assessed characteristics of MC-associated outpatient visits by patient sex (Table 2). The incidence of MC was more for males than females regardless of region. There this no much studies regarding this distribution.

Independent of age and sex, both poverty and crowded living quarters have been hypothesized as general risk factors to account for perceived higher rates of MCV particularly in the tropics (12,14). In this path we have found that low socioeconomic associated with high risk factors. Moisture and humidity have been implicated as relevant climatic factors as well [12], but the strength of association between poverty, geography or climate, and incidence of infection with MCV remains undetermined.

In our study, overall incidence of MC-associated clinic visits was observed to be highest in the periphery and low socioeconomic state, than center and high socioeconomic state regions. Also, sex and age was a determinant for the incidence of virus.

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