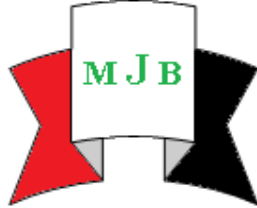


Experience with Molluscum Contagiosum: A Descriptive (Case-Series) Study of 467 Patients in Al-Diwaniya and Evaluation of Their Modes of Treatment

Usama Abdul-Jaleel Althuwayni
College of Medicine , Al-Qadissiya , Iraq



Received 5 May 2014

Accepted 9 June 2014

Abstract :

Background: Molluscum contagiosum MC is a benign viral infection of the skin it is most easily transmitted by direct skin-to-skin contact, especially in three groups which are primarily affected i.e. young children,sexually-active adults, and immunosuppressed persons, especially those with HIV infection but in Iraq its epidimiology is largely unknown, despite the fact that large outbreaks have occurred in recent years.

Objective: This study was aimed at providing information on series of 467 cases of MC patients with efficacy of 2 modes of treatment (tretinoin and curettage) in Al-diwaniya

Methods : In this decriptive case series study, 467 patients were identified as having MC by dermatologists in Al-Diwanyia Teaching Hospital ,over period of 5 months (from September 2013 to January 2014). Patients age and gender, duration of the disease in months ,site, number of the lesions, family history and mode of treatment.

404 patients were treated by curettage , while 63 were treated by tretinoin. We evaluate the response to treatment, recurrences and adverse effects

Results : 467 patients were studied ,their ages ranged from (9months-56years) . there were 201 (43%) females and 266 (57%) males. The healthy adults between (30-50) had 1st peak of incidence in our patients; the face was highly significant involved in adults (P values < 0.001) and had low percentage in the genital area (6.5%) which indicating sexual transmission was not the main way of transmission. Again the children had the 2nd peak of incidence Curettage method was used in the majority of the patients .It is cheap, effective with no side effects, however there was 9% recurrences. Topical retinoic acid 0.05% daily had taken 1-2 weeks. None of the patients experienced a serious adverse effect apart from irritation and inflammation of the lesions .After resolution, there was no recurrence of the lesions in this way of treatment.

Conclusion : The results showed that there is an up surge of MC infection in Al-diwaniya ,Iraq. The healthy adults between (30-50) had 1st peak of incidence in our patients with highly significant involvement of the face in adults. Sexual transmission was not the main way of transmission .Curettage is cheap, effective with no side effects, but with some recurrences Topical retinoic acid was effective with no recurrence of the lesions

Keywords : Molluscum contagiosum, Al-diwaniya , Iraq

الخلاصة:

المليساء المعدية من الامراض الفايروسية المعدية وينتقل باللامسه الجلديه ويصيب الاطفال , والكبار كعدوى جنسيه في المناطق التناسليه , والمعتلين مناعيا مثل مرض الايدز . على الرغم من ظهور انتشار بهذا المرض في العراق حاليا لكن لا توجد احصائيات واضحه له . هذه الدراسه تهدف الى اعطاء المعلومات عن ٤٦٧ حاله من هذا المرض وفعاليه طريقتين من العلاج له في مدينه الديوانيه. تم تشخيص ٤٦٧ حاله من المليساء المعدية سريريا من قبل اختصاصي الجلديه في مستشفى الديوانيه التعليمي خلال ٥ اشهر من ايلول ٢٠١٣ الى كانون الثاني ٢٠١٤. تم اخذ المعلومات بشأن العمر, الجنس, مده المرض, رجوعه وظهوره لدى العائله وطريقه العلاج بحامض الازيتونيك او الرفع بالقشط تراوحت اعمار المرضى من ٩ اشهر الى ٥٦ سنه , ٢٠١ اناث, ٢٦٦ ذكور اعلى قمه للاصابات كانت لدى البالغين الاصحاء

من ٣٠ الى ٥٠ سنة مع نسبه معتد بها في الوجه وكانت نسب الاصابه في المناطق التناسليه قليله جدا مما يعني ان انتشار المرض لم يكن بالطرق الجنسية كان العلاج بالقشط الكيوريت فعالا ورخيصا لكن مع نسبه قليله لرجوع المرض اما العلاج بحامض الريتينويك كان ايضا فعالا ولم تسجل حالات رجوع المرض.

الكلمات الدالة : المليساء المعدية , الديوانية, العراق.

Introduction

Molluscum contagiosum is a benign viral infection of the skin that is largely if not exclusively a disease of humans, caused by a virus in the family Poxviridae (MC). In otherwise healthy individuals, infection with Molluscum contagiosum virus (MC) results in a benign self-limiting condition marked by the formation of distinctive, persistent dermal lesions that evolve slowly over the course of several weeks to several months⁽¹⁾. 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, etc.) have been associated with increased risk for infection⁽²⁾. Because of the characteristic appearance of MC lesions, diagnosis is generally made without laboratory testing. Often specific treatments or therapies are not pursued for MC infection in immune competent individuals, as lesions 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^(3,4). The disease is common, but its incidence in most areas is not reliably known. The disease is rare under

the age of 1 year, perhaps due to maternally transmitted immunity and a long incubation period. In hot countries where children are lightly dressed and in close contact with one another, spread within households is not uncommon. The age of peak incidence is reported as between 2 and 5 years^(5,6). In cooler climates, however, spread within households is rare and infection may occur at a later age^(5,7). Perhaps correlated with use of swimming pools and shared bathing facilities⁽⁸⁾. A later incidence peak in young adults is attributable to sexual transmission with lesions more common in the genital area. Infection of children through sexual abuse is presumably possible. However, to a greater extent than warts, MC is seen quite commonly on the genital, perineal and surrounding skin of children, and abuse should not be regarded as likely unless there are other suspicious features. There is a clinical impression that MC is common in patients with atopic eczema⁽⁹⁾, and occasional reports describe widespread infections, possibly based on impaired immunity. Topical steroids and also topical calcineurin inhibitors have been suspected as a contributing factor in eczema another patients^(10,11). Unusually widespread lesions have been reported in immunosuppressed patients with HIV disease, sarcoidosis and in those receiving immunosuppressive therapy^(12,13,14), suggesting that cell-mediated immunity is significant in control and elimination of the infection. However, the epidemiology an incidence of Molluscum contagiosum in Iraqi is largely unknown.

Aim of study

to evaluate the characteristics ,clinical features of MC on series of 467 patients and efficacy of 2 modes of treatment (tretinoin and curettage) in in Al-diwaniya city.

Patients and Methods

A descriptive (case-series) study of 467 patients was conducted in Al-diwaniya teaching Hospital Ad-daiwaniya , Iraq over period of 5 months (from September 2013 to January 2014). Patients with MC was diagnosed clinically by a dermatologists in the dermatology clinical department in Al-diwaniya teaching Hospital over these 5 months period and data of these patients were collected and analysis was done asfollows: patient age and gender, duration of the disease in

months ,site, number of the lesions, family history and mode of treatment.

404 patients were treated by curettage , while 63 were treated by tretinoin. We evaluate the response to treatment, recurrences and adverse effects.

Data Analysis

Statistical analysis was carried out using the SSP (Smith’s statistical package, version 2.80). The statistical significance (P<0.05) was determined mainly by one Z test between proportions.

Results

1-Patient Characteristics

467 patients entered this study. Table or figure (1) showed that mean age of the patients at presentation was 28.8 ± 17.4 years (9months-56years). There were 201 (43%) females and 266 (57%) males.

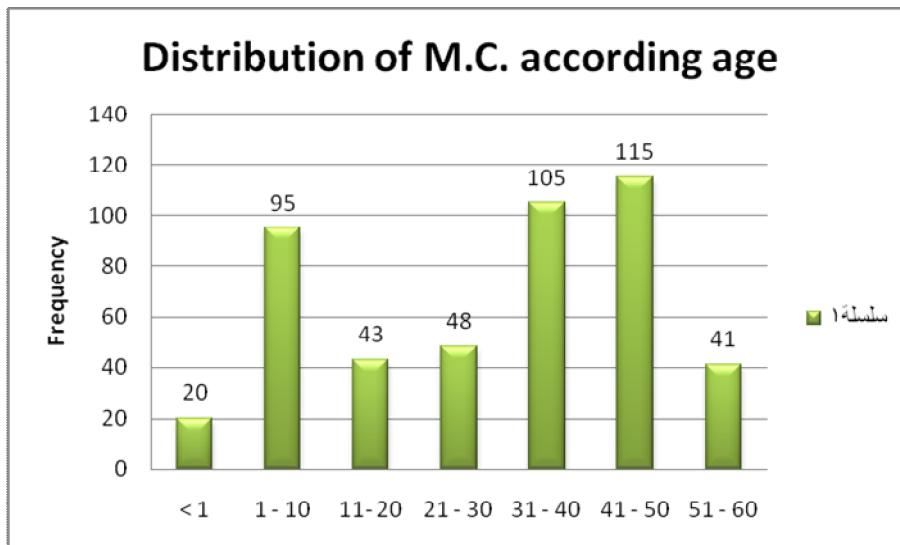


Figure1: Distribution of MC according to the age of patients at presentation

2- The Duration of The Disease :

The duration of MC disease prior to presentation ranged from (1- 12 months)

with 1-3 months in (44.53%) of the patients and from 4-6 months in (22.48%) of the patients.

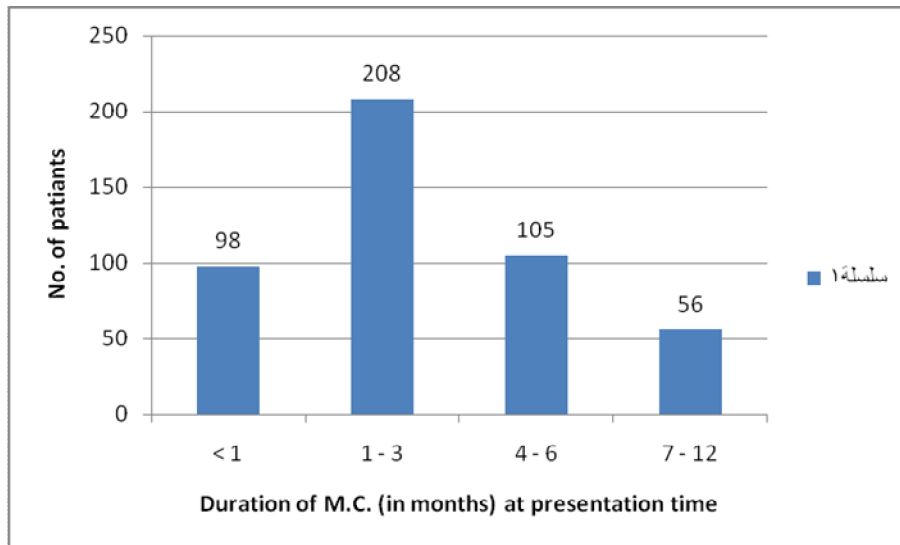


Figure 2. Duration of molluscum contagiosum prior to presentation in the 467 patients

3 -Location and Numbers of Mc Lesions

The distribution of the patients' MC lesions is presented in figure 3. Molluscum contagiosum lesions were limited to 1 region in 416 patients (88%), at the following distribution: face 259(55.5%), extremities 61 patients (12 %), trunk 56 patients (13%) and genitalia 40 (8.5 %). Molluscum contagiosum lesions were present on multiple sites (the trunk, face and extremities) in 51 patients (11 %).

There were a highly significant statistical differences (P values less than 0.001) when we compare the distribution of the M.C. lesions at the face with the distributions at

the trunk, extremities, and the genitalia respectively.

There was also a highly significant statistical difference between the distributions of the M.C. lesions at the two sides of the face (the M.C. lesions were presented mainly at the right side of the face in 206 patients (79.5%) compared to the left side of the face in 53 (20.5%)) the P value was also < 0.001.

There was also a highly significant statistical difference between the distributions of the M.C. lesions in genitalia between adults (28 patients, 70%) and children (12 patients, 30%) with P value also < 0.001.

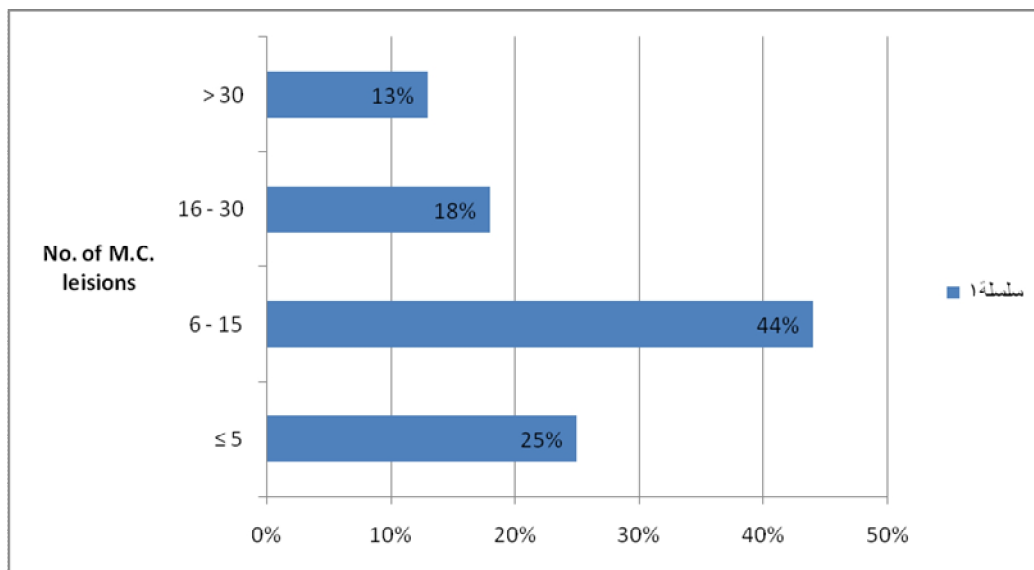


Figure. 3 :The number of lesions in each patient distributed between patients

The patient with MC were divided into 4 groups according to the no. of lesions in each patients; patients with

≤5 lesions and patients with 6-15 and patients with 16-30 and patients with > 30 lesions (Figure. 3).

Table 1 . Location of MC according to body site

| Body site | MC lesions (n= 467 patients) |
|--|------------------------------|
| Trunk | 61(13.03 %) |
| Extremities | 65 (13.91 %) |
| Face : | 248 (55.4%) |
| Mainly right sided | 206(44.1%) |
| Mainly left sided | 42(11.3%) |
| Genitalia : | 40(8.56%) |
| Children | 11.6(2.5%) |
| Adults | 30.3(6.5%) |
| Multiple sites (Trunk +/- Extremities +/- Face) | 49 (11%) |

Inflamed Mc Lesions

A total of 28 patients (6 %) had at least 1 inflamed MC lesion,. Inflamed MC lesions were characterized by substantial erythema and swelling, including pustular or fluctuant lesions.. A systemic antibiotic was administered to inflamed MC lesions owing to suspicion of infection . 3 patients presented with single inflamed nodular lesion surrounded by wide

induration ,which resolved after 3-4 months

4- Family History

215 patients with MC gave negative family history (46%) of MC patients , while 252 patient with MC gave positive family history (54%). P=0.886 (Not significant using Z test at 0.05 level of significance).

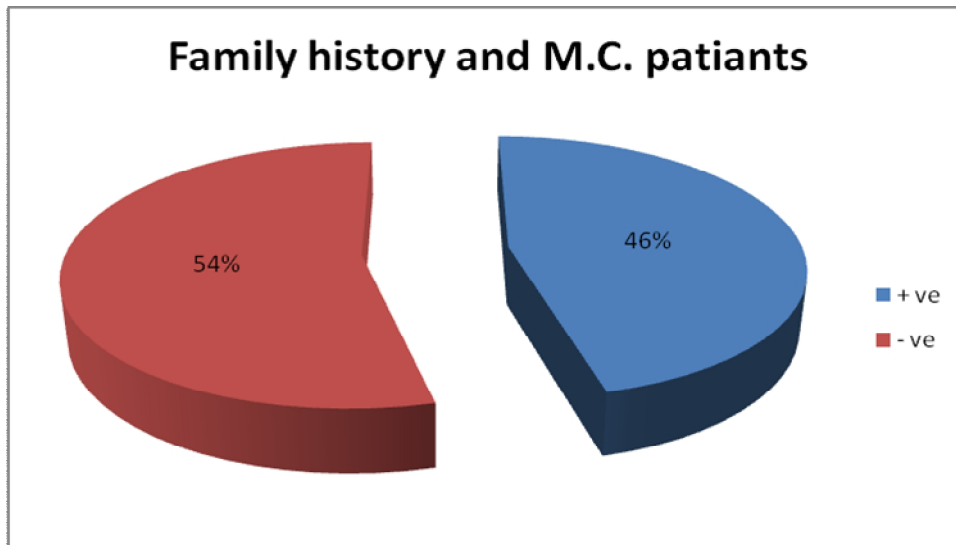


Figure 4 : family history in MC patients at presentation time

5-Treatment And Course

Treatments administered for the patients were either curttage or topical retinoic acid. Curettage was used in 404 patients the (1st group) with a mean of 1.4 treatment sessions per patient [range, 1-5 sessions]. The period between sessions was 2-3 weeks. This method was effective with no side effects, however 9% had recurrences which was treated by the same way and oral cimetidine (approximately 40 mg/kg daily divided into 2 doses, a maximum of 1600 mg daily) was administered to them to decrease the chance of recurrence. The 2nd group 63patients which was treated by topical retinoic acid 0.05% daily until resolution pf MC lesions which had taken 1-2 weeks. However, some form of inflammation induced by this method made 3% of patients stopped treatment and looked for another method of treatment i.e curttage. None of the patients experienced a serious adverse effect related to any of the treatments administered apart from irritation and inflammation of the lesions. After resolution, there was no recurrence of the lesions in this way of treatment.

Discussion

MC is benign but nonetheless frequently troublesome viral infection. Patients and families are bothered by this infection

because of its often prolonged course, because it may persist for months⁽¹⁸⁾. A subclinical carrier state of MC virus probably exists in many adults⁽¹⁹⁾. MC infection occurs worldwide and appears specific to humans. An Australian study documented an overall seropositivity rate of 23 %, which supports the view that sub-clinical or mild unrecognized disease exists in population⁽¹⁸⁾. Transmission may occur via direct skin or mucous membrane contact, or via fomites. Bath towels, and baths have all been reported as sources of infection, and individuals involved in close contact also appear at higher risk. Autoinoculation and koebnerization also play a role in spread of lesions⁽¹⁸⁾. In Iraq, in last few years, there was increase in the incidence of in MC 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. In Iraq, a cross-sectional study showed that MC virus infection represents 8.9% from all dermatological patients who visit Alkindy Teaching Hospital over the six months study period. Also, 52.5 % of dermatological infections was MC, it was high percentage in comparison to other dermatological infectious disease

(20). This increase in MC infection may be explained by overcrowding and large Iraqi families. Large number of peoples were grouped together during social and religious events using same towels and beds, this help in spreading virus by direct skin to skin contact . The adults between (30-50) had 1st peak of incidence in our patients; the face was highly significant involved (P values less than 0.001) in comparison to other sites involved. These healthy patients who had MC lesion was mainly on the right side of their face reflecting the common social greeting by cheek to cheek habit i.e "right cheek MC ".In this study, MC in adults had low percentage in the genital area (6.5%) which indicating sexual transmission was not the main way of transmission. Again the children had the 2nd peak of incidence but regarding the genital area it was 2.5 % which not necessarily indicate child abuse especially in the absence of other suspicious features

Treatments administered for the patients were either curettage or topical retinoic acid. Curettage method was used in the majority of the patients .It is cheap, effective with no side effects, however frequent sessions were need for complete resolution and 9% had recurrences.The 2nd group recieved topical retinoic acid 0.05% daily until resolution pf MC lesions which had taken 1-2 weeks .Apart from irritation and inflammation of the lesions ,there was no serious side effects. After resolution, there was no recurrence of the lesions in this way of treatment.

Conclusions

Hiba et al in a large cross-sectional study conducted in 2011 revealed that the incidence of MC in Iraq showed large outbreaks which have occurred in recent years⁽²⁰⁾. In our study, the results again showed that there is an up surge of MC infection in Al-diwaniya , Iraq. The healthy adults between (30-50) had 1st peak of incidence in our patients with highly significant involvement of the face in adults. Sexual transmission was not the

main way of transmission. Curettage is cheap, effective with no side effects, but with some recurrences .Topical retinoic acid was effective with no recurrence of the lesions

References

- [1]. William D James , Timothy G Berger,Dirk M Eleston MD. Molluscum contagiosum; Andrew's Disease of the skin Clinical Dermatology; eleventh edition 2011, Elsevier inc . pp 387-389.
- [2]. Braue A, Ross G, Varigos G, Kelly H (2005) . Epidemiology and impact of childhood molluscum contagiosum: a case series and critical review of the literature. *Pediatr Dermatol* 22: 287–294.
- [3]. Pauly CR, Artis WM, Jones HE (1978). Atopic dermatitis, impaired cellular immunity, and molluscum contagiosum. *Arch Dermatol* 114: 391–393.
- [4]. Wollenberg A, Engler R (2004) . Smallpox,vaccination and adverse reactions to smallpox vaccine. *Curr Opin Allergy Clin Immunol* 4: 271–275.
- [5]. Postlethwaite R, Watt JA, Hawley TG. Features of molluscum contagiosum in the north-east of Scotland and in Fijian village settlements. *J Hyg (Lond)* 1967; 65: 281–91.
- [6]. Kyriakis KP, Palamaras I, Terzoudi S et al. Case detection rates of molluscum contagiosum in childhood. *Pediatr Dermatol* 2007; 24: 198–9.
- [7]. Niizeki K, Kano O, Kondo Y. An epidemic study of molluscum contagiosum . Relationship to swimming. *Dermatologica*1984; 169: 197–8.
- [8]. Choong KY, Roberts LJ. Molluscum contagiosum, swimming and bathing: a clinical analysis. *Australas J Dermatol* 1999; 40: 89–92.
- [9]. Leslie KS, Dootson G, Sterling JC. Topical salicylic acid gel as a treatment for molluscum contagiosum in children.*J Dermatol Treat* 2005; 16: 336–40.
- [10]. Hellier FF. Profuse molluscacontagiosa of the face induced by

- corticosteroids. *Br J Dermatol* 1971; 85:398.
- [11]. Fery-Blanco C, Pelletier F, Humbert P .Molluscum contagiosum profus aucoursd' unedermatiteato piquetraitée par tacrolimus: intérêt du cidofovir. *Ann Dermatol Venereol* 2007; 134: 457-9.
- [12]. Ganpule M, Garretts M.Molluscum contagiosum and sarcoidosis: report of a case. *Br J Dermatol* 1971; 85: 587-9.
- [13]. Rosenberg EW, Yusk JW. Molluscum contagiosum. Eruption following treatment with prednisone and methotrexate. *Arch Dermatol*1970; 101: 439-41.
- [14]. Antoniou C, Kosmadaki MG, Stratigos AJ . Genital HPV lesions and molluscum contagiosum occurring in patients receiving anti-TNF-alpha therapy. *Dermatology* 2008; 216: 364-5.
- [15]. Katzman M, Carey JT, Elmets CA . Molluscum contagiosum and the acquired immunodeficiency syndrome: clinical and immunological details of two cases. *Br J Dermatol* 1987; 116: 131-8.
- [16]. Lim KS, Foo CC. Disseminated molluscum contagiosum in a patient with chronic plaque psoriasis taking methotrexate. *Clin Exp Dermatol*, 2007; 32: 591-3.
- [17]. Bunney MH, Hunter JA, Ogilvie MM. Molluscum contagiosum of the sole. A rare diagnosis or a rare condition? *Br J Dermatol* 1969;81: 623-5.
- [18]. Tom w., Freidlander SF; Poxvirus infections. In: Wolff Klaus, Gold Smith, Lowell A., Katz, Stephen I., Gilchrest, Barbara A., Paller, Amy S., Leffell, David J. .Fitzpatrick's Dermatology in General medicine . Seventh edition; McGraw-Hill. Philadelphia, 2008 pp1911-13.
- [19]. klausewolff, Richard allen Johnson; viral infection of skin and mucosa. fitzpatric's color atlas and synopsis of clinical dermatology . sixth edition; McGraw-Hill. 2009. pp771-4.
- [20]. Hiba H. Maqdasi Mohammad Y. Abbas & Galawish A. Abdullah. Molluscum contagiosum: A cross sectional study. *Inter J Advance Bio Rres* 2013: 74-79