

Acral lentiginous melanoma versus lentigo maligna melanoma among Iraqi patients

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ABSTRACT

Objective: To report the different clinical aspects of malignant melanoma and their varieties in Iraqi patients.

Methods: We carried out this study in the Department of Dermatology and Venereology, Baghdad Teaching Hospital, Baghdad, Iraq during the period from 1985-2005. Eighteen patients with malignant melanoma were enrolled in this work. The different clinical aspects and histopathological examination were determined.

Results: The study population consisted of 18 patients (15 females and 3 males) with a female to male ratio of 5:1. Their ages ranged from 12–75 years (mean \pm SD, 43.72 \pm 14.75 years) while the duration of the disease ranged between 0.25–5 years (1.98 \pm 1.44 years). The duration of acral lentiginous melanoma was 0.5–4 years (2.16 \pm 1.36 years) and in nodular type was 0.5–3 years (1.28 \pm 0.90 years), while in lentigo maligna melanoma was 1.5–5 years (3.37 \pm 1.49 years). Regarding the location and gender of the patients affected, 6 cases (all females) were on the acral parts of the body (4 on the feet, and 2 on the hands), 5 patients (all females) on the face, 5 cases (4 females and one male) on the lower legs, while the remaining 2 male cases, was on the interscapular region and the other one on the elbow area.

Conclusion: We conclude that malignant melanoma in Iraqi patients is a disease of younger females, which presented mainly as acral lentiginous melanoma, nodular melanoma and lentigo maligna melanoma and superficial spreading melanoma.

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Malignant melanoma is a great problem worldwide particularly in light-skinned people. However, black people are relatively less prone to the risk of melanoma even when living in the same geographical region.¹⁻³ Other studies revealed less frequency of malignant melanoma in Asians people. Malignant melanoma can be classified into 4 main varieties. These types can be distinguished clinically and histopathologically with some overlap. The 4 major patterns of melanoma are: superficial spreading melanoma (SSM), nodular melanoma (NM), acral lentiginous melanoma (ALM) and lentigo maligna melanoma (LMM).¹⁻⁶

There are many evidences showing racial difference in the account of different variants and their locations.^{1-3,6-8} In light skinned population, SSM represents approximately 70% of all melanomas and is the most common type of cutaneous melanoma.^{1-3,7} The SSM most commonly occurs on the legs of women and the upper back of men, although it can occur at any site. The SSM is diagnosed most commonly in the fourth and fifth decades.¹⁻³ The second most common subtype of melanoma is nodular melanoma, with a frequency of 15-30% of all types.^{1-3,8} The trunk, head, and neck are the most frequent anatomic sites for NM. Nodular melanoma is diagnosed most commonly in mid-to late 40s.¹⁻³ While it is relatively infrequent in light-skinned Caucasians accounting only in 2-8% of melanoma.¹⁻⁶ The mean age at presentation is early in the sixth decade.¹⁻³

Lentigo maligna melanoma is the least common type of melanoma (usually 4 to 15 of all melanoma patients), although a rising incidence has been reported.^{1-3,7,8} The LMM is almost exclusively located on sun-exposed skin of the head and neck, with the nose and cheeks the most common sites. The LMM occurs in an older age group, with a median age at diagnosis of approximately 65 years old.¹⁻³

Acral lentiginous melanoma represents the most common form in darker-complexion individuals

(constitutes 60-72% in blacks and 24-46% in Asians).¹⁻⁶

The gender incidence shows slight female predominance in Europe, while in North America the incidence rate of melanoma was higher in men than in women.¹⁻³ In contrast, incidence rates in women in the United Kingdom and Norway was noted to be higher than those in men.⁷⁻⁹

Melanoma is very rare prior to puberty, but when it does occur, approximately 50% of cases arise in giant congenital naevi.¹⁻³

The aim of this study was to characterize the frequency of variable types of malignant melanoma among Iraqi patients.

Methods. Eighteen patients with malignant melanoma were evaluated in this case series study. It was conducted in the Department of Dermatology and Venereology, Baghdad Teaching Hospital, Baghdad, Iraq during the period from 1985-2005. A detailed history was obtained from each patient regarding all demographic aspects related to the disease. Also, full clinical assessment was carried out. Incisional or excisional biopsy was performed from each patient according to the size and site of the tumor for histopathological confirmation. All cases which were clinically diagnosed as malignant melanoma and proved histologically are included in the study, while those cases with doubtful clinical or histopathological results are excluded.

Results. Table 1 shows the demographic and clinical aspects of all patients. There were 15 females and only 3 males with female to male ratio of 5:1. Their ages ranged from 12-75 years with a mean \pm SD of 43.72 ± 14.75 years while the duration of the disease ranged between 0.25-5 years (1.98 ± 1.44 years). The duration in ALM was 0.5-4 years (2.16 ± 1.36 years) and in nodular type was 0.5-3 years with a mean \pm SD of 1.28 ± 0.9 years while in LMM was 1.5-5 years (3.37 ± 1.49 years).

The ages of the 3 affected males were 12, 28 and 55 years subsequently while the female ages ranged between 20-75 (47.7 ± 12.97) years.

Regarding the location and gender of the patients affected, 6 cases (all females) were on the acral parts of the body (4 on the feet, and 2 on the hands), 5 patients (all females) on the face, 5 cases (4 females and one male) on the lower legs, while the remaining 2 male cases, one on the interscapular region and the other one on the elbow area.

Accordingly, we classified our patients into the following variants: 6 were ALM (33.3%), 7 NM (38.88%), 4 LMM (22.2%), and one SMM (5.55%). Eight patients gave a history of preceding mole which changed gradually into a malignant melanoma. Inguinal

Table 1 - Showing all demographic and clinical aspects of patients with malignant melanoma.

| | Gender | Age (yrs) | Duration (yrs) | Site | Type |
|-----|--------|-----------|----------------|----------------------|-------------------------------|
| 1. | Female | 20 | 4 | Lateral side of heel | Acral lentiginous |
| 2. | Female | 55 | 3 | Little toe | Acral lentiginous |
| 3. | Female | 46 | 3 | Sole | Acral lentiginous |
| 4. | Female | 75 | 0.5 | Palm | Superficial spreading (acral) |
| 5. | Female | 60 | 1 | Little toe | Acral lentiginous |
| 6. | Female | 39 | 1.5 | Ring finger | Acral lentiginous |
| 7. | Female | 48 | 3 | Face | Lentigo maligna |
| 8. | Female | 45 | 1.5 | Face | Lentigo maligna |
| 9. | Female | 40 | 4 | Face | Lentigo maligna |
| 10. | Female | 50 | 5 | Left cheek | Lentigo maligna |
| 11. | Female | 40 | 0.5 | Face | Nodular |
| 12. | Female | 45 | 1 | Lower leg | Nodular |
| 13. | Male | 35 | 3 | Inter scapular | Nodular |
| 14. | Male | 12 | 2 | Elbow | Nodular |
| 15. | Female | 57 | 0.25 | Lower leg | Superficial spreading (acral) |
| 16. | Female | 30 | 0.5 | Lower leg | Nodular |
| 17. | Male | 55 | 1 | Lower leg | Nodular |
| 18. | Female | 35 | 1 | Lower leg | Nodular |

Age: mean \pm SD, 43.72 ± 14.75 years
Duration: 1.98 ± 1.44 years
Female: Male ratio 5:1

lymph nodes were involved in 2 patients with nodular variant while axillary lymph node involved was noticed in one patient with subungual melanoma.

Discussion. The incidence of melanoma has been steadily increasing in the Caucasian population in the past several decades, but no great increases in the non-Caucasian populations of East and South Asia and South America, and this increase is worldwide.¹⁻³ The annual rate of increase of melanoma incidence over this time period was 4.3% and the continued rise in melanoma incidence has been longer than that for any of the other leading sites of cancer.¹ There is convincing evidence from the epidemiological studies that exposure to solar radiation is the major cause of cutaneous melanoma in light-pigmented populations, but malignant melanoma

is also related to the skin types according to the ability of the skin to tan. People with types 1 and 2 skin are at greater risk of developing melanoma whereas people with brown or black skin have a low risk as their skin provides natural protection against the sun.^{1-3,10}

Iraqi people fortunately do not suffer from malignant melanoma as compared with the western countries mainly because of the melanin contents of the skin that protects against excessive sunlight exposure.^{1-3,11,12} Still there are individual variations for reasons we do not know, their dark skin cannot protect against sunlight. So they developed malignant melanoma on the exposed parts of the body in most of the cases as had been noticed in the present cases.^{1-3,7,8}

Most reported studies regarding malignant melanoma showed that age incidence around the sixth decade while our patients mainly around the fourth decade.^{1-3,7,8} So in Iraq, usually younger patients suffer from malignant melanoma.

The present work showed that malignant melanoma is a disease of females in all variants with a female to male ratio of 5:1 where ALM was 33.3%, NM was 38.88%, LMM was 22.2%, and SSM 5.55%). This is in contrast to the European cases where there is slight female preponderance, although their types were different.^{1-3,8} So male has a protective factor against melanoma for unknown reason, although they were outdoor workers and had more exposure to sunlight than females.¹⁻³

The duration of malignant melanoma was much shorter when compared to what has been reported and this mean that the disease in the present work were more progressive and were early detected [acral lentiginous malignant melanoma 0.5–4 (2.17 ± 1.3) years and in NM type was 0.5–3 (1.28 ± 0.90) years while in LMM was 1.5–5 (3.38 ± 1.5) years].¹⁻³ The majority of melanoma seen in Asians and blacks were ALM with different frequencies.¹⁻⁶ However, the site specific incidence was similar in all races. While the cases in the present work showed mixed variants of ALM, NM, LMM, and SSM types and this means that we had the Asian type with European style of the disease.

We wonder whether these 3 varieties are present in Iraq only or similar to the Middle East countries as we did not find related reports in the published literature. We conclude that malignant melanoma in Iraqi patients is not a very rare disease and it mainly affect young female patients with 3 main variants ALM, NM and LMM.

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