

Mycosis fungoides: Frightening up-surgings cases as a new challenge for dermatologists and as a witness of the crime of frequent wars

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Mycosis fungoides (MF) accounts just about 50% of all primary skin lymphomas.^{1,2} The pathogenesis includes interaction of environmental, genetic and immunologic factors.^{3,4} The clinical progression of classic MF is variable and sluggish extend from years or decades, early it presents as pruritic patches then advance to more infiltrated skin plaques, and finally tumors.^{3,5} In addition, numerous variants have been pronounced in the literature, such as hypopigmented, hyperpigmented, follicular, and ichthyosiform variant. So, MF is added in the differential diagnosis and as a mimicking disease for many chronic skin diseases.⁶

The results of the histopathological study could be inconclusive,^{7,8} hence mandating frequent use of the Immunohistochemical techniques to establish the diagnosis.⁹

Nearly 0.4 per 100,000 per year is the incidence of MF that has been stated in the USA.⁴ While in Iraq, it was considered extremely rare in the

1970s, and 1980s and was just like a dream to see a case of MF. Then was just surprised to notice an upsurge in cases of MF in Iraq since 1990 and to become a well-established fact. A study conducted between March 1998 and August 1999 recognized and diagnosed 20 cases of MF within this period. This suggests an important increase in the existence of MF in Iraq compared to the prior 1980.⁸

Another Iraqi study that was carried out in one dermatology center between 2006 to 2019, revealed that the frequency of MF is rising and higher in men than women. As well as giving the impression of an increase in the rate of MF which goes parallel with an increase of other skin tumors from the Middle and South of Iraq like squamous cell carcinoma, Kaposi sarcoma, Paget's disease, and dermatofibrosarcoma protuberans.⁹⁻¹² Also, the clinical habit has changed, mostly in the direction of more invasive and unusual variants of MF commonly poikilodermoid, lichenoid, or hyperpigmented subtype.^{11,13}

On the other hand, almost all malignancies in Iraq from 2000 to 2016 (specifically lung and digestive system cancers) exhibited steadily rising patterns, particularly following 2007.¹⁴ The situation in Mosul city is comparable to other Iraqi provinces, where the rate of breast and lung cancer, leukemia, and lymphoma have

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not been only doubled but even tripled as before the Gulf Wars.¹⁵ Furthermore, the uranium concentration in the serum of Iraqi women suffering from breast cancer was significantly higher than those in the control group.¹⁶

However, as a result of seeing multiple cases in everyday practice, raised big question marks concerning this highly increasing frequency of MF. The explanation for this upsurging is not well clear but it could be attributed to the following issues:

The combat circumstances of Iraq for decades, where the eight years Iran-Iraq War since 1980, followed by the first Gulf Wars of 1991, tailed by blockade for 13 years, then attack and occupation of Iraq during the second Gulf Wars of 2003. These invasive dirty forces have used all kinds of weapons like depleted uranium and chemical missiles during wars in Iraq. These frequent wars induced contamination that has spread extensively in the air, water and soil.

Furthermore, one could speculate and hypothesize that these triggered the development of genetic mutations that may be disturbing the general health and immunity of Iraqi populations, as manifesting in a rise in birth defects and cancers.¹⁵ Genetic alteration might result in the shifting of MF from the classical presentation to more unusual florid types that are unfamiliar to most dermatologists.¹⁷

Lastly, the poverty in food and drugs especially during 13 years of the blockade should be kept into consideration as a possible trend in this ascending curve.

In conclusion, dermatologists must be trained to accurately and early diagnose all variants of MF and properly manage them, and further studies for the coming years are mandatory as we expect a more dramatic increase in the rate of MF in

Iraq. Still, there is urgent necessity for strengthening environmental and epidemiological multicenter medical researches over several provinces to explore the ongoing concerns of wars on the incrimination for MF incidence.

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