

# MEBENDAZOLE IN CUTANEOUS LEISHMANIASIS

Pages with reference to book, From 20 To 21

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Cutaneous leishmaniasis is endemic in the Mediterranean area, the Middle East and Central Asia. It represents major health problems. In Iraq, the disease is prevalent and known as Baghdad boil<sup>1</sup>. The lesions are self-healing but their duration is long and often unpredictable. They are uncomfortable and morbidity is expected particularly with multiple lesions. Each lesion heals with scar that is proportional to the size and site of the lesion. The scar and disfiguring site are inevitable even with or without available drugs which are often unsatisfactory and some of them have side effects. Mebendazole, a broad spectrum anthelmintic drug, has been found to be effective in the treatment of protozoal infection including *Giardia lamblia*, *Chilomastix mesnili* and *Trichomonis hominis*<sup>2,3</sup> and *Schistosoma haematobium* and *S. mansoni*<sup>4,5</sup>. Therefore, an attempt was made to investigate the possible effect of mebendazole in the treatment of another protozoan, *Leishmania tropica*, which infected three adult patients.

## CASE REPORTS

Three adult patients, residents of Baghdad City, attended the clinic with 1-2 months history of typical oriental sore lesions. Physical examination showed that the lesions were raised, crusted and fungating at granulomatous stages. One patient had three lesions on the lateral aspect of extensor surface of the right forearm, and one patient had two lesions on the right and left forearm. The other patient had one lesion on the left forearm and two lesions on the right leg. These cutaneous lesions were non-tender and the subcutaneous tissue was indurated. Scrapings were made at the edge of the lesions and smears were prepared and stained with Giemsa. Amastigotes (*Leishman-Donovan* bodies) were found in the smears. Laboratory investigations including haematological indices, hepatic and renal functions were normal. VDRL was negative. The patients had no previous anti-leishmanial treatment. After informed consent 1 g/day of mebendazole was given in three doses. The patients were instructed to attend the clinic twice weekly and to record any side effects including headache, dizziness, vertigo, nausea, vomiting, palpitation, skin rash and pyrexia. Laboratory investigations were repeated at two weeks interval. At two weeks, there was an obvious decrease in the size of lesions with less exudate. The lesions were dry and resolved completely at four weeks with very minimal residual scarring and pigmentation. The slit skin smear failed to reveal leishmanian organism. No side effect was recorded and the drug did not induce any changes in the laboratory investigations. Six months follow-up was uneventful and the pigmentation resolved in few months.

## DISCUSSION

Mebendazole in a dose of 1 g/day appeared to heal cutaneous leishmaniasis. It was well tolerated and had no side effects. No hepatic, haematological or renal adverse effects were encountered. The lesions healed completely within 4 weeks without evident and disfiguring scarring. The mode of action is not known. However, mebendazole can kill tissue parasites in high doses<sup>6</sup>. It might stimulate host immunity against leishmanian organisms as has been suggested with other parasitic infections<sup>7</sup>. It has been known that mebendazole blocks carbohydrate uptake by nematodes and decreases ATP which is essential for survival. The mainstay of therapy for both cutaneous and mucocutaneous leishmaniasis

consisted of pentavalent antimonials<sup>8</sup>. Nevertheless, oriental sore in Iraq responded poorly to them<sup>9</sup>. Other drugs including cotrimexazole, rilampicin, allopurinol, metronidazole, levamisole and more recently ketaconazole<sup>10</sup> have many side effects. Therefore Mebendazole might represent the non-toxic, inexpensive oral medicine for treating leishmaniasis.

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