ORIGINAL CONTRIBUTIONS

EVALUATION OF RIFAMPICIN FOR CUTANEOUS LEISHMANIASIS

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Eight patients having cutaneous leishmaniasis were given 150-1200 mg rifampicin a day orally depending upon the age and body weight of the patient. Treatment was stopped after 2 months if there was no improvement; otherwise it was continued till complete regression of the lesion(s). In 2 patients the lesions regressed completely in 2 months and 6 months respectively, 3 patients improved partially, while the remaining 3 showed no improvement at all.

Key words : Cutaneous leishmaniasis, Rifampicin.

There are various modalities available for the treatment of cutaneous leishmaniasis. These include sodium stibogluconate, meglumine antimonate, co-trimoxazole, metronidazole, berberine sulphate, amphotericin B, local infiltration of mepacrine and freezing the lesion with carbon dioxide snow[1]. In some cases however, none of these agents are effective. Rifampicin[2,3] and ketoconazole[4] are the latest drugs recommended for this purpose. We report our experience with rifampicin for the treatment of 8 cases of cutaneous leishmaniasis.

Case Reports

Case 1

A 13-year-old girl from Kabul had an asymptomatic erythematous plaque on the bridge of her nose for the last 6 months. Skin biopsy showed marked infiltration of the dermis with histiocytes containing *Leishmania tropica* bodies. Earlier treatment with sodium stibogluconate 2 ml intramuscular daily for 10 days, co-trimoxazole (sulphamethoxazole 800 mg and trimethoprim 160 mg) twice daily along with metronidazole 200 mg twice daily for 20 days and intralesional injections of mepacrine on two occasions was ineffective. She was given 600 mg rifampicin orally daily which led to complete healing of the lesion in 8 weeks. Further follow-up for 1 year showed no recurrence.

Case 2

A 15-year-old girl, also from Kabul had an asymptomatic, erythematous crusted plaque approximately 4 cm in diameter, on the left side of her face for the last 6 months. Skin biopsy in her case also showed the presence of *Leishmania tropica* bodies inside the histiocytes. Earlier treatment with metronidazole 600 mg twice daily for 7 days and co-trimoxazole 2 tablets twice daily for 7 days had made no difference. Treatment with oral rifampicin 1200 mg daily resulted in a considerable regression of the lesion during the next 9 weeks but she stopped further treatment. During the next 8 weeks there was no further change in the lesion. At that time rifampicin was restarted in the same dose with which the lesion healed completely during the next 17 weeks. There was no recurrence during the next 20 weeks.

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Case 3

This was a 22-year-old boy from Kabul having 6 asymptomatic erythematous, juicy-looking nodules on his face and left index finger for the last 7 weeks. Skin biopsy demonstrated the presence of *Leishmania tropica* bodies inside the histiocytes. Treatment with rifampicin 600 mg daily for 10 weeks was ineffective. The lesions had increased. Subsequently co-trimoxazole 2 tablets twice daily for 2 weeks was also ineffective. However, 6 weeks after stopping co-trimoxazole, the lesions had regressed to almost half the previous size without further treatment. There was no further followup.

Case 4

An 11-year-old boy from Kabul had 20 asymptomatic erythematous papules, nodules and ulcers on the face and neck for the last 6 months. His skin biopsy was positive for *Leishmania tropica* bodies. Treatment with 600 mg rifampicin daily orally for 4 weeks was ineffective. An increase in the dose to 1200 mg daily also made no difference during the next 8 weeks. Subsequent treatment with co-trimoxazole 2 tablets twice daily for 2 weeks also was futile.

Case 5

The fifth case was a 9-year-old brother of case 4, having 5 asymptomatic erythematous nodules on his face and nose for the last 5 months. *Leishmania tropica* bodies could be demonstrated in the skin biopsy. Earlier treatment with rifampicin 300 mg daily for 4 weeks had been ineffective. Treatment with 600 mg rifampicin daily for 8 weeks also had no effect. Subsequently, co-trimoxazole 2 tablets twice daily for 2 weeks was also ineffective. In fact he developed 3 new lesions.

Case 6

A 2½-year-old girl from Rajasthan, had 5 asymptomatic erythematous papules, nodules and ulcers on her left cheek for the last 1 year. Skin biopsy confirmed the diagnosis of cutaneous leishmaniasis. Treatment with rifampicin 150 mg daily orally resulted in regression of the lesions to approximately half the size during the next 3 weeks. There was no further followup.

Case 7

A 3½-year-old boy from Kabul had 5 asymptomatic juicy-looking papules on his face for the last 1 year. The diagnosis of cutaneous leishmaniasis was confirmed by skin biopsy. Treatment with 300 mg rifampicin orally daily for 3 months led to regression of all the lesions to half their size, but the patient stopped further treatment. During the next 5 months there was no further change in the lesions. Re-institution of rifampicin 150 mg daily for 2 months and then 450 mg daily for another 2 months made no difference.

Case 8

This patient was a 7-year-old boy, again from Kabul, with 6 asymptomatic erythematous papules and nodules on his face for the last 3 months. He also had scars of previous cutaneous lesions of leishmaniasis on his face. Treatment with 300 mg rifampicin daily orally for 1½ months led to partial regression of the lesions.

Comments

A significant proportion of patients having cutaneous leishmaniasis recover spontaneously if the patient is able to mount a cell-mediated immune response against the infecting organism. This generally happens between 2 to 12 months after the onset of infection[1] but in a particular patient it is most difficult to be certain whether the recovery is spontaneous or due to the drug being used at that time. Out of 8 patients studied by us, two patients showed a remarkable recovery under treatment with rifampicin, especially when other methods of treatment had failed, but three other patients showed no response, while the remaining three showed only partial relief. This is in sharp contrast to

the success in all the 41 cases reported by Selim and Kandil[2] and in the only case treated by Vasquez[3]. The patient treated by White et al[5] however showed no relief at all, while out of 8 cases treated by Livshin[6], 6 had shown complete relief, 1 case showed questionable success, and one case was a complete failure. Thus, although rifampicin had not been found useful in all the cases, our experience is the most disappointing of all the studies reported so far. Seven of our cases belonged to Afghanistan and it is worth considering if there is any difference in the susceptibility of *Leishmania tropica* found in this part of the world compared to those found elsewhere. Further studies will be useful. All the same, since two of our patients showed a remarkable recovery after other drugs had failed, rifampicin can still be considered worth a trial when other therapeutic procedures do not bring about the desired result.

References

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