Deseril and diethylcarbamazine in the treatment of onchocerciasis

Sir—We have previously experienced great difficulty in using diethylcarbamazine (dec) for the treatment of heavily infected patients in Cameroon (FUGLSANG & ANDERSON, 1974; ANDERSON et al., 1976). Salazar-Mallen (personal communication) believes that an injection of Deseril (Sandoz) alleviates the initial adverse effects of dec in the skin and conjunctiva, and thus makes the use of this drug more acceptable in the treatment of onchocerciasis in Mexico. We have therefore carried out a small study to assess the possible beneficial effects of Deseril tablets in the treatment of heavily infected patients in Cameroon.

Out-patient treatment was commenced on nine patients with ocular onchocerciasis as follows: dec 25 mg morning and evening on day one, 50 mg morning and evening on day two, 100 mg morning and evening on day three, 150 mg morning and evening on day four, and 200 mg morning and evening on subsequent days. With each dec dose the patients received a 1-4 mg tablet of Deseril, but steroid cover was not given. Two patients refused to continue the treatment after the second dose of dec, and the remaining seven were all so prostrated after the third or fourth administration, that they did not attend for the next dose. At this stage one patient, a male of 37, was near collapse, with hypotension, tachycardia, and fast respiratory rate. Although the seven patients returned for the later dosages, it was not considered safe to deprive them of additional corticosteroid cover. This small study suggested that Deseril alone failed to alleviate the most serious reactions.

In a further study, 13 out-patients were given dec and Deseril as above, together with the corticosteroid Betnelan. As judged by the attendance rate during the first critical days of treatment, this group did rather worse than a group of 14 patients treated with dec and Betnelan alone, since five of the 13 did not attend for the fourth or fifth dose as compared with three of the 14 in the second group. The Mazzotti reaction seemed to be diminished equally by both Betnelan and Deseril, and no case, whether on Deseril or Betnelan as the only alleviator, showed excessive reactions to treatment in the eye.

Lagraulet et al. (1964) treated 60 patients with dec and Deseril tablets in Upper Volta, and they compared the adverse effects with those seen in a similar control group treated with dec alone. They concluded that Deseril might have a slight action on the urticarial type of reaction provoked by dec, but that it did not diminish the duration of this reaction or of the pruritus. From the above studies we conclude that Deseril alone failed to alleviate the side effects of dec in Africa.

We are, etc.,

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References


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Evidence for immunodepression of Syrian hamsters and Mongolian jirds by Dipetalonema viteae infections

Sir—Immunodepressive effects on hosts have been attributed to a number of protozoan (GOODWIN et al., 1973; Mcgregor, 1972) and helminth (FAUBERT & TANNER, 1971; CYPESS et al., 1973) parasites. The occurrence of depressed antibody production to heterologous antigen injections was investigated in hamsters (Mesocricetus auratus) and mongolian jirds (Meriones unguiculatus) infected with Dipetalonema viteae. Hamsters were infected with 150 and jirds with 30 third-stage larvae by subcutaneous injection. Corresponding control groups were injected with Hanks' balanced salt solution (HBSS), used in recovering the infective larvae from the tick intermediate hosts. Bovine serum albumin (BSA) and sheep red blood cells (SRBC) were used as antigens. Groups of animals receiving BSA injections each contained 10 animals and those receiving SRBC injections each contained four animals. The first intraocular injections of BSA in hamsters were made in 10-0 mg quantities, in 1-0 ml of 0-9% saline emulsified in equal parts of Freund's complete adjuvant, 10 weeks after the inoculation of infective larvae. Subsequent intraocular inoculations of 10-0 mg quantities of BSA, without adjuvant, were made 14 and 17 weeks after larval inoculation in hamsters. Similar injections were made in jirds using 0-0 mg of BSA in 0-05 ml quantities 10 and 13 weeks after larval inoculation. Antibody titres were measured by indirect haemagglutination on individual sera collected at weekly intervals. Comparisons of mean antibody titres between infected and uninfected animals, made one week following BSA injections, revealed a significant decrease in antibody level in both infected hamsters and jirds. The mean antibody titres at both 15 and 18 weeks after larval inoculation in infected hamsters was 1:4 vs. 1:64 in uninfected jirds. Infected jirds had a mean antibody titre of 1:128 at 14 weeks post-larval inoculation, as compared to 1:2048 for uninfected jirds. In no instance was it possible to relate mean microfilaraemia, duration of microfilaraemia or peak microfilaraemia to the level of immunodepression when data from individual animals were examined. All infected animals expressed some degree of immunodepression when compared to the uninfected control groups.

Injections of 1-0 ml of 20% SRBC suspension was made intraperitoneally into infected and uninfected hamsters in two experiments conducted five and 10 weeks after D. viteae inoculation. Infected and uninfected animals not receiving SRBC's served as uninfected controls in both cases. Splens of injected and control animals were removed four days after injection of SRBC and modified Jerne plaque assays were performed. Significant difference in the mean number of plaque-forming cells per 106 spleen cells (PFC) was not seen when the response of infected and uninfected animals were compared five weeks after D. viteae inoculation. However, a significant reduction (44%) in the mean number of PFC was seen in infected, compared with uninfected animals, 10 weeks after D. viteae in-