



Plasma concentrations of β -TG after dipyridamole administration in patients with juvenile-onset diabetes mellitus.

Ten diabetics (five males aged 19–24 and five females aged 22–30) were given dipyridamole for 8 weeks. The upper limit for 70 controls was 60 ng/ml.

of prostacyclin¹¹ or a release of prostacyclin. Further prospective studies should be undertaken to clarify the biological effect of dipyridamole administration or other prostacyclin stimulators in the course of diabetes mellitus.

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SCHISTOSOME PATTERNS IN EGYPT

SIR,—Dr Abdel-Wahab and his colleagues (Aug. 4, p. 242) have observed, from a sample of 315 persons in a single village located in the south central Nile Delta, Egypt, that the prevalences of the two species of human schistosomes found in the Nile Delta were changing. 44 years ago *Schistosoma hæmatobium* dominated *S. mansoni*;¹ now the reverse seemed to be true. This change was felt to be related to the construction of the Aswan High Dam which led to conditions that did not favour the snail vector for *S. hæmatobium* but rather the snail vector host for *S. mansoni*. They also cite data taken over the past seven years by a local village hospital.

If *Bulinus* sp., the vector for *S. hæmatobium*, is not favoured by the ecological changes created by the High Dam, why does *S. hæmatobium* continue to flourish in other areas of the Nile Valley, including the north central Delta? We examined 4404 specimens, based on a reproducible sample unlike Scott's¹ which had no sample frame, in the northern central Delta near Kafr El Sheikh.² Seven villages were sampled and 30.0±0.78% were found infected with *S. hæmatobium* and 20.0±0.32% were positive for *S. mansoni* ova. The urines were examined by the simple sedimentation, and the stools³ at

a central laboratory. 150 km south of Cairo are the villages of Beni Suef where *S. hæmatobium* was found in 26.7±0.25% of 3418 persons examined, representing six villages. There were 7 cases of *S. mansoni* detected in children under fourteen years of age, 1 of which was in a male infant. Preliminary data for sample sites in the far south in the Luxor area show the prevalence of *S. hæmatobium* to be 36% in 5896 persons sampled from six villages. The prevalence in these villages ranged from 21% to 65%. This substantial amount of variation from village to village, which is characteristic of the disease in rural Egypt,⁴ was found in all sites studied. In the Delta the range was 19–52% and 14–28% for *S. hæmatobium* and *S. mansoni*, respectively. This variation⁵ impedes the drawing of conclusions based on small samples from a single village. We found in our analysis of data obtained from each village health centre or health unit from the entire governorate of Qena in Upper Egypt, flagrant inconsistencies and fabrication. One must also consider the basis of self-selection associated with all data sets obtained from hospital records when interpreting such information.

Was sampling for snail vectors in the area of the Difra village representative of the snail population to which villagers were exposed? Farooq in 1966⁶ indicated that different species of snail vectors inhabit different niches within the irrigation scheme of the Delta. Local irrigation patterns may contribute to the variation in snail population. This does not mean that the observation of Abdel-Wahab et al. are erroneous, but rather that their results would be more meaningful if snail-sampling methods had been described in more detail.

We agree that *S. mansoni* infections are very probably changing in their pattern of distribution and prevalence. There is substantial evidence² that in many parts of Egypt the patterns for both species are changing and have been changing over several decades.^{1,2,7}

We have prepared a comprehensive review of all schistosomiasis surveys completed from the turn of the century in an effort to guide investigators about methods of sampling in areas where information is most needed.² A country-wide stratified random sample is urgently needed to establish baseline distributions in the Delta or elsewhere in Egypt.

We found that confounding variables such as domestic water supply were strongly associated with schistosomiasis prevalence.² Other factors such as health care, education, occupation, sampling fraction, and age and sex structure of the population must be taken into account before conclusions are drawn. If we were to extrapolate from our findings to the area-wide prevalence of schistosomiasis our results suggest that the prevalence throughout rural Egypt has declined over the past 44 years. 44 years ago the prevalence of schistosomiasis was 87% in the rural population and was probably a maximum, conditions for transmission being optimal. More field data collected as described by Farooq et al.⁴ are needed, especially in light of the large-scale mollusc-killing programmes now under way in Upper Egypt.

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11. Moncada S, Flower RJ, Russell-Smith N. Dipyridamole and platelet function. *Lancet* 1978; ii: 1257–58.
1. Scott JA. The incidence and distribution of the human schistosomiasis in Egypt. *Am J Hyg* 1937; 2: 566–614.
2. Miller FD, Hussein M, Mancy KH, Hilbert MS. Schistosomiasis in rural Egypt: report EPA 600/1-78-070. Athens, Georgia: Environmental Protection Agency, 1978.
3. Blagg W, Schloegel EL, Mansour NS, Khalaf GI. A new concentration technique for the demonstration of protozoa and helminth ova in feces. *Am J Trop Med Hyg* 1955; 4: 23–28.

4. Farooq M, Nielsen J, Samaan SA, Mallah MB, Allan A. The epidemiology of *S. hæmatobium* and *S. mansoni* infections in the Egypt-49 Project area: 2. Prevalence of bilharziasis in relation to personal attributes and habits. *Bull Wld Health Org* 1966; 35: 293–318.
5. Gilles HM, Zaki AA, Soussa MH, Samaan SA, Soliman SS, Hassan A, Barbosa F. Results of a seven year snail control project on the endemicity of *S. hæmatobium* infection in Egypt. *Am J Trop Med Parasitol* 1973; 67: 45–65.
6. Farooq M. Importance of determining transmission sites in planning Bilharziasis control. *Am J Epidemiol* 1966; 83: 603–12.
7. Wright WH. Results of a country-wide schistosomiasis survey. In: Ansari N, ed. Epidemiology and control of schistosomiasis (bilharziasis). Baltimore: University Park Press, 1955: 42–48.