

229. Larouzé, B., Dazza, M. C., Gaudebout, C., Habib, M., Elamy, M. & Cline, B. Absence of relationship between Schistosoma mansoni and hepatitis B virus infection in the Qalyub Governorate, Egypt. Annals of tropical medicine and parasitology, 4: 373-375 (1987).
230. Lawley, T. J., Ottesen, E. A., Hiatt, R. A. & Gazze, L. A. Circulating immune complexes in acute schistosomiasis. Clinical and experimental immunology, 37: 221-227 (1979).
231. Lechtenberg, R. & Vaida, G. A. Schistosomiasis of the spinal cord. Neurology, 27: 55-59 (1977).
232. Lehman, J. S. Jr, Mott, K. E., Morrow, R. H. Jr, Muniz, T. M. & Boyer, M. H. The intensity and effects of infection with Schistosoma mansoni in a rural community in northeast Brazil. American journal of tropical medicine and hygiene, 25: 285-294 (1976).
233. Lehman, J. S. Jr, Mott, K. E., de Souza, C. A. M., Leboreiro, O. & Muniz, T. M. The association of schistosomiasis mansoni and proteinuria in an endemic area, a preliminary report. American journal of tropical medicine and hygiene, 24: 616-618 (1975).
234. Lemma, A., Desole, G., Polderman, A. M., Mazengia, B., Redda, A. & Kloos, H. The epidemiology of Schistosoma mansoni infection in Tensae Berhan, Ethiopia: prevalence of schistosomiasis. Ethiopian medical journal, 17: 63-74 (1979).
235. Levy, L. F., Baldachin, B. J. & Clain, D. Intracranial bilharzia. Central African journal of medicine, 21: 76-84 (1975).
236. Livramento, J. A., Machado, L. R., Silva, L. C. & Spina-Franca, A. Cerebrospinal fluid neuroschistosomiasis syndrome. Arquivos de neuropsiquiatria, 43: 372-377 (1985).
237. Locke, S., Richardson, E. P., Martin, J. B., Anderson, M. D. & Davis, K. R. Case record of the Massachusetts General Hospital. New England journal of medicine, 312: 1376-1383 (1985).
238. LoVerde, P. T., deWald, J. & Minchella, D. J. Further studies of genetic variation in Schistosoma mansoni. Journal of parasitology, 71: 732-734 (1985).
239. Lowenthal, M. N., Hutt, M. S. R., Jones, I. G., Mohelsky, V., O'Riordan, E. C. & Scott, G. L. Massive splenomegaly in northern Zambia. II. Schistosomal splenomegaly and elevated IgG. Transactions of the Royal Society of Tropical Medicine and Hygiene, 74: 99-102 (1980).
240. Lunde, M. N. & Ottesen, E. A. Enzyme-linked immunosorbent assay (ELISA) for detecting IgM and IgE antibodies in human schistosomiasis. American journal of tropical medicine and hygiene, 29: 82-85 (1980).
241. Lyra, L. G., Rebouças, G. & Andrade, Z. A. Hepatitis B surface antigen carrier state in hepatosplenic schistosomiasis. Gastroenterology, 71: 641-645 (1976).
242. MacDonald, D. M. & Morrison, J. G. L. Cutaneous ectopic schistosomiasis. British medical journal, 2: 619-620 (1976).
243. Mackenjee, M. K. R., Coovadia, H. M. & Chutte, C. H. J. Clinical recognition of mild hepatic schistosomiasis in an endemic area. Transactions of the Royal Society of Tropical Medicine and Hygiene, 78: 13-15 (1984).

244. Madwar, M. A., Khalil, A. & Kabil, S. M. Preliminary studies on hepatitis B surface antigen in the livers of patients with schistosomiasis. Journal of the Egyptian Medical Association, 66: 583-590 (1983).
245. Magalhães Filho, A. D. G., Barbosa, A. V. & Ferreira, T. C. Glomerulonephritis in schistosomiasis with mesangial IgM deposits. Memórias do Instituto Oswaldo Cruz, 76: 181-188 (1981).
246. Mahmoud, A. A. Schistosomiasis. New England journal of medicine, 297: 1329-1331 (1977).
247. Mahmoud, A. A. F. The ecology of eosinophils in schistosomiasis. Journal of infectious diseases, 145: 613-622 (1982).
248. Mahmoud, A. A. F., Arap Siongok, T., Ouma, J., Houser, H. B. & Warren, K. S. Effect of targeted mass treatment on intensity of infection and morbidity in schistosomiasis mansoni. Lancet, i: 849-851 (1983).
249. Mansour, M. M., Farid, Z., Bassily, S., Salah, L. H. & Watten, R. H. Serum enzyme tests in hepatosplenic schistosomiasis. Transactions of the Royal Society of Tropical Medicine and Hygiene, 76: 109-111 (1982).
250. Marcial-Rojas, R. A. & Fiol, R. E. Neurologic complications of schistosomiasis. Annals of internal medicine, 59: 215-230 (1963).
251. Marshall, I. Experimental chemotherapy. In: Rollinson, D. & Simpson, A. J. G., ed. The biology of schistosomiasis. from genes to latrines, pp. 399-430, London, Academic Press, 1987.
252. Massoud, A. M., Ghoneem, M. & Massoud, M. Effect of oxamniquine and praziquantel on intrasplenic pressure and portal vein diameter in hepatosplenic schistosomiasis. Journal of the Egyptian Society of Parasitology, 16: 427-437 (1986).
253. Medeiros-Neto, G. A., Kallas, W. G., Cavalieri, H., Knobel, M. & Matter, E. Thyroid function and chronic hepatosplenic schistosomiasis: peripheral conversion of thyroxine to 3,5,3'-triiodothyronine and pituitary-thyroid relationship. Journal of clinical endocrinology and metabolism, 55: 403-407 (1982).
254. Medley, G. & Anderson, R. M. Density-dependent fecundity in Schistosoma mansoni infections in man. Transactions of the Royal Society of Tropical Medicine and Hygiene, 79: 532-534 (1985).
255. Mendes, E. & Mendes, N. F. High levels of IgE in patients with schistosomiasis mansoni. Tropical and geographical medicine, 34: 133-137 (1982).
256. Merritt, C. R. B. Ultrasonographic demonstration of portal vein thrombosis. Radiology, 133: 425-427 (1979).
257. Miegeville, M. & Vermeil, C. Essais de mise en évidence des relations schistosomes-salmonelles. Etudes in vivo et in vitro. Bulletin de la Société de Pathologie exotique, 75: 183-191 (1982).
258. Mies, S., Lorsson, E., Mori, T., Rosa, P. & Raia, S. The hepatic artery in mansonic schistosomiasis: hypertrophy or atrophy? Gastroenterology, 78: 1314 (1980).
259. Mies, S., Mori, T., Larsson, E., Rosa, O. & Raia, S. Hepatic veins in mansonic schistosomiasis: angiographic and hemodynamic pattern. Gastroenterology, 78: 1314 (1980).

260. Mikhail, M. M. & Mansour, M. M. The relationship between serum carnitine levels and the nutritional status of patients with schistosomiasis. Clinica chimica acta, 7: 207-214 (1976).
261. Mikhail, M. M. & Mansour, M. M. Complications of human schistosomiasis and their effect on levels of plasma copper, zinc and serum vitamin A. Human nutrition: clinical nutrition, 36: 289-296 (1982).
262. Miyasato, M. Experimental study of the influence of Schistosoma japonicum infection on carcinogenesis of mice liver treated with N-2-fluorenylacetamide (2-FAA). Japanese journal of parasitology, 33: 41-48 (1984).
263. Mohamed, A. E. The Katayama syndrome in Saudis. Journal of tropical medicine and hygiene, 88: 319-322 (1985).
264. Molyneux, M. E. & Galati-Jensen, F. Successful drug treatment of schistosomal myelopathy. South African medical journal, 54: 871-872 (1978).
265. Molyneux, M. E., Supran, E. M., Islam, M. N., Banatvala, J. E. & Hutt, M. S. R. Hepatitis-B virus determinants in patients with liver disease in Malawi. Transactions of the Royal Society of Tropical Medicine and Hygiene, 74: 383-388 (1980).
266. Monson, M. H. Praziquantel in acute schistosomiasis. Transactions of the Royal Society of Tropical Medicine and Hygiene, 81: 777 (1987).
267. Monteiro de Barros, O., Marigo, C., Giannoni, F. & Frizzo, F. J. Schistosomiasis cor pulmonale and myocarditis. Arquivos dos Hospitais da Santa Casa de São Paulo, 2: 1-40 (1956).
268. Moore, D. L., Grove, D. I. & Warren, K. S. The Schistosoma mansoni egg granuloma: quantitation of cell populations. Journal of pathology, 121: 41-50 (1977).
269. Morcos, S. H., Khayyal, M. T., Mansour, M. M., Saleh, S., Ishak, E. A., Grgis, N. I. & Dunn, M. A. Reversal of hepatic fibrosis after praziquantel therapy of murine schistosomiasis. American journal of tropical medicine and hygiene, 34: 314-321 (1985).
270. Morearty, P. L. & Brito, E. Elution of renal antischistosome antibodies in human schistosomiasis mansoni. American journal of tropical medicine and hygiene, 26: 717-722 (1977).
271. Mott, K. E. "Control of schistosomiasis": Morbidity-reduction and chemotherapy. Acta Leidensia, 49: 101-111 (1982).
272. Mott, K. E. Diagnostic recommendations before and after treatment of schistosomiasis. Proceedings 9th International Congress of Infectious and Parasitic Diseases, 3: 43-48, Munich, July 20-26, 1986.
273. Mott, K. E. & Cline, B. L. Advances in epidemiology survey methodology and techniques in schistosomiasis. Bulletin of the World Health Organization, 58: 639-647 (1980).
274. Musa, A. M., Asha, H. A. & Veress, B. Nephrotic syndrome in Sudanese patients with schistosomiasis mansoni infection. Annals of tropical medicine and parasitology, 74: 615-618 (1980).
275. Nash, T. E., Cheever, A. W., Ottesen, E. A. & Cook, J. A. Schistosome infections in humans: perspectives and recent findings. Annals of internal medicine, 97: 740-754 (1982).

276. Nash, T. E., Garcia-Coyco, C., Ruiz-Tiben, E., Nazario-Lopez, H. A., Vazquez, G. & Torres-Borges, A. Differentiation of acute and chronic schistosomiasis by antibody responses to specific schistosome antigens. American journal of tropical medicine and hygiene, 32: 776-784 (1983).
277. Natali, P.G. & Cioli, D. Immune complex nephritis in Schistosoma mansoni-infected mice. European journal of immunology, 6: 359-364 (1976).
278. Neto, V. A., Basile, M. A., Carvalho, S. A., Almeida, J. W. R., Shiroma, M. & Hutzler, R. U. Treatment of Salmonella long-duration infection with oxamniquine. Revista do Instituto de Medicina tropical de São Paulo, 21: 137-140 (1979).
279. Nooman, M. Z., Khalil, M., Nafeh, M., Elwan, S. I., El-Sharkawi, M., Omar, A. M., Atta, S. M. & Reda, I. Behaviour of hepatitis B antigen in bilharzial patients infected with HBs positive viral hepatitis. Egyptian journal of bilharziasis, 4: 79-87 (1977).
280. Olds, G. R. & Mahmoud, A. A. F. Role of host granulomatous response in murine schistosomiasis mansoni. Eosinophil-mediated destruction of eggs. Journal of clinical investigation, 66: 1191-1199 (1980).
281. Omer, A. H. S. Portal hypertension and chronic salmonellosis in *situs invertus*. Annals of tropical medicine and parasitology, 72: 127-132 (1978).
282. Omer, A. H. S., Hamilton, P. J. S., Marshall, T. F. C. & Draper, C. C. Infection with Schistosoma mansoni in the Gezira area of the Sudan. Journal of tropical medicine and hygiene, 79: 151-157 (1976).
283. Omer, H. O. & Abdel Wahab, S. M. Secondary amyloidosis due to Schistosoma mansoni infection. British medical journal, i: 375-377 (1976).
284. Oréfice, F., Simal, C. T. R. & Pittella, J. H. Schistosomotic choroiditis. I. Funduscopic changes and differential diagnosis. British journal of ophthalmology, 69: 294-299 (1985).
285. Ott, B. R., Libbey, N. P., Ryter, R. J. & Trebbin, W. M. Treatment of schistosome-induced glomerulonephritis. A case report and review of the literature. Archives of internal medicine, 143: 1477-1479 (1983).
286. Ottesen, E. A., Hiatt, R. A., Cheever, A. W., Sotomayor, Z. R. & Neva, F. A. The acquisition and loss of antigen-specific cellular immune responsiveness in acute and chronic schistosomiasis in man. Clinical and experimental immunology, 33: 38-47 (1978).
287. Ouma, J. H., Wijers, D. J. B. & Arap Siongok, T. K. The effect of repeated targeted mass treatment on the prevalence of schistosomiasis mansoni and the intensity of infection in Machakos, Kenya. Annals of tropical medicine and parasitology, 79: 431-438 (1985).
288. Paes, R. A. P. & Marigo, C. Giant follicular lymphoma in schistosomiasis mansoni. Revista do Instituto de Medicina tropical de São Paulo, 23: 287-292 (1981).
289. Pannier, S., Got, C., Bourgeois-Gavardin, M., Lacert, P., Piera, J. B. & Grossiord, A. Schistosomiasis of the spinal cord (four cases). Revue neurologique, 133: 165-173 (1977).
290. Pedroso, E. R. P., Lambertucci, J. R., Costa Rocha, M. O., Greco, D. B., Ferreira, C. S., Raso, P. & Lima, D. P. Alterações clínico-radiológicas pulmonares pós-tratamento na esquistossomose mansoni aguda e crônica. Revista da Sociedade Brasileira de Medicina tropical, 18: 23-31 (1985).

291. Pedroso, E. R. P., Lambertucci, J. R., Greco, D. B., Rocha, O. C., Ferreira, C. S. & Raso, P. Pulmonary schistosomiasis mansoni: post-treatment pulmonary clinical-radiological alterations in patients in the chronic phase: a double-blind study. Transactions of the Royal Society of Tropical Medicine and Hygiene, 81: 778-781 (1987).
292. Pereira, F. E. L., Bortolini, E. R., Carneiro, J. L. A., da Silva, C. R. M., Neves, R. C. A. B, O blood groups and hepatosplenic form of schistosomiasis mansoni (Symmer's fibrosis). Transactions of the Royal Society of Tropical Medicine and Hygiene, 73: 238 (1979).
293. Piekarski, A., Pasticier, A., Scemama, R., Slama, R. & Roujeau, J. Hypertension artérielle pulmonaire d'évolution maligne chez une jeune femme atteinte de bilharziose. Coeur et médecine interne, 18: 353-357 (1979).
294. Pittella, J. E. H. Vascular changes in cerebral schistosomiasis mansoni: a histopathological study of fifteen cases. American journal of tropical medicine and hygiene, 34: 898-902 (1985).
295. Pittella, J. E. H. & Lana-Peixoto, M. A. Brain involvement in hepatosplenic schistosomiasis mansoni. Brain, 104: 621-632 (1981).
296. Pittella, J. E. H. & Oréfice, F. Schistosomotic choroiditis. II. Report of first case. British journal of ophthalmology, 69: 300-302 (1985).
297. Polderman, A. M. Transmission dynamics of endemic schistosomiasis. Tropical geographical medicine, 31: 465-475 (1979).
298. Polderman, A. M. Schistosomiasis in a mining area: intersectoral implications. Tropical medicine and parasitology, 37: 195-199 (1986).
299. Polderman, A. M., Gryseels, B., Gerold, J. L., Mpamila, K. & Manshande, J. P. Side-effects of praziquantel in the treatment of Schistosoma mansoni in Maniema, Zaire. Transactions of the Royal Society of Tropical Medicine and Hygiene, 78: 752-754 (1984).
300. Polderman, A. M. & Manshande, J. P. Failure of targeted mass treatment to control schistosomiasis. Lancet, i: 27-28 (1981).
301. Pompeu, F. & de Lacerda, P. R. S. Subarachnoid hemorrhage due to S. mansoni, a rare etiology. Journal of neurology, 221: 203-207 (1979).
302. Pope, R. T., Cline, B. L. & El Alamy, M. A. Evaluation of schistosomal morbidity in subjects with high intensity infections in Qalyub, Egypt. American journal of tropical medicine and hygiene, 29: 416-425 (1980).
303. Prata, A. Schistosomiasis mansoni. Clinics in gastroenterology, 7: 49-75 (1978).
304. Prata, A. Infection with S. mansoni. In: Jordan, P. & Webbe, G., ed. Schistosomiasis, epidemiology, treatment and control, London, William Heinemann Medical Book Ltd, pp. 105-127, 1982.
305. Prata, A., Bina, J. C. & Dietze, R. Regression of hepatosplenic schistosomiasis by specific therapy. Proceedings IXth International Congress of Infectious and Parasitic Diseases, 3: 41-43, Munich, July 20-26, 1986.
306. Pucci, H., Vilela, M. P., Miszputen, S. J., Carvalho, N., Secaf, F. & Sead, F. A. Intestinal fat absorption in human schistosomiasis. Revista da Associação Médica Brasileira, 24: 341-344 (1978).

307. Queiroz, L. S., Nucci, A., Facure, N. O. & Facure, J. J. Massive spinal cord necrosis in schistosomiasis. Archives of neurology, 36: 517-519 (1979).
308. Radhakrishnan, K., Maloo, J. C., Poddar, S. K. & Mousa, M. E. Central nervous system infections in Benghazi, Libya: experience from a community-based adult medical neurology set-up. Journal of tropical medicine and hygiene, 90: 123-126 (1987).
309. Raia, S., Mies, S. & Macedo, A. L. Portal hypertension in schistosomiasis. Clinics in gastroenterology, 14: 57-82 (1985).
310. Rajaonarivelo, P., Rajaona, H. R., Alix, J. L., Couderc, P., Daveau, C., Santoro, F., Nogueira-Quertruz, J. A., Lovens, M., Capron, A. & Cordonnier, D. Hypocomplementic membrano-proliferative glomerulonephritis in a malagasy patient with hepatosplenic schistosomiasis mansoni. Néphrologie, 7: 1-5 (1986).
311. Reiner, N. E., Kamel, R., Higashi, G. I., El Naggar, A., Aguib, M., Ellner, J. J. & Mahmoud, A. A. F. Concurrent responses of peripheral blood and splenic mononuclear cells to antigenic and mitogenic stimulation in human hepatosplenic schistosomiasis. Journal of infectious diseases, 140: 162-168 (1979).
312. Rezende, G. L. Survey on the clinical trial results achieved in Brazil comparing praziquantel and oxamniquine in the treatment of mansoni schistosomiasis. Revista do Instituto de Medicina tropical de São Paulo, 27: 328-336 (1985).
313. Rocklin, R. E., Brown, A. P., Warren, K. S., Pelley, R. P., Houba, V., Siongok, T. K. A., Ouma, J., Sturrock, R. F. & Butterworth, A. E. Factors that modify the cellular-immune response in patients infected by Schistosoma mansoni. Journal of immunology, 125: 1916-1923 (1980).
314. Rizk, A. M., Abdel Kader, M. M., Hashmat, H. A., El-Agouz, W. & Abdella, M. Sex steroids in bilharzial liver affection. Acta biologica et medica germanica, 39: 991-993 (1980).
315. Rocha, H., Cruz, T., Brito, E. & Susin, M. Renal involvement in patients with hepatosplenic schistosomiasis mansoni. American journal of tropical medicine and hygiene, 25: 108-115 (1976).
316. Rocha, H., Kirk, J. W. & Hearey, C. D. Prolonged Salmonella bacteremia in patients with Schistosoma mansoni infection. Archives of internal medicine, 128: 254-257 (1971).
317. Ruberti, R. F. & Chopra, S. A. Schistosomiasis of the spinal cord. Médecine d'Afrique noire, 23: 77-81 (1976).
318. Saad, A. M. A., El Masri, S. H., Omer, A. H. S. & El Hassan, A. M. A clinico-pathological study on intestinal bilharziasis in the Sudan. East African medical journal, 62: 397-402 (1985).
319. Sabbour, M. S., Moanis, A., Makled, M. K. I., Fattah, S. A. A. & El-Hawary, A. T. Serum immunoglobulin levels in bilharzial colitis. Journal of the Egyptian Society of Parasitology, 12: 9-16 (1982).
320. Sadigursky, M. & Andrade, Z. A. Schistosomiasis and renal amyloidosis. Revista do Instituto de Medicina tropical de São Paulo, 20: 67-69 (1978).
321. Sadigursky, M. & Andrade, Z. A. Pulmonary changes in schistosomal cor pulmonale. American journal of tropical medicine and hygiene, 31: 779-784 (1982).

322. Saif, M., Tawfik, J., Ali, M. A., El-Mahrouky, S. F., Galil, N. & Galal, M. N. Serum transferrin, albumin and IgG levels in hepatosplenic bilharziasis in Egypt. Journal of the Egyptian Medical Association, 60: 731-744 (1977).
323. Saleh, S. Some biochemical changes in schistosomiasis mansoni. Egyptian journal of bilharziasis, 6: 31-42 (1979).
324. Salih, S. Y., Abu Sabaa, H., Abu Asha, H. & Abdel Satir, A. Salmonellosis complicating schistosomiasis in the Sudan. Journal of tropical medicine and hygiene, 80: 14-18 (1977).
325. Salih, S. Y., Abu Sabaa, H. M. & Ali, M. S. Eosinophilia in Schistosoma mansoni infection. East African medical journal, 54: 421-424 (1977).
326. Salih, S. Y., Marshall, T. F. C. & Radalowicz, A. Morbidity in relation to the clinical forms and to intensity of infection in Schistosoma mansoni infection in the Sudan. Annals of tropical medicine and parasitology, 73: 439-449 (1979).
327. Salih, S. Y., Voller, A. & Woodruff, A. W. Serum immunoglobulin concentration in human Schistosoma mansoni and S. haematobium infections in the Sudan, with special reference to the effect of chemotherapy. Tropenmedizin und Parasitologie, 29: 269-274 (1978).
328. Salum, P. N. B., Machado, L. R. & Spina-Franca, A. Schistosomiasis mansoni of the spinal cord: clinical and cerebrospinal fluid evaluation in 16 patients. Arquivos neuropsiquiatria, 39: 289-295 (1981).
329. Sanchez Longo, L. P. Involvement of the central nervous system in S. mansoni infection in Puerto Rico. Unpublished WHO working paper, SCH/EC/WP/84.22, prepared for the Expert Committee on the Control of Schistosomiasis, 6 pp.
330. Santos, M. L. & Coura, J. R. Morbidade da esquistossomose no Brasil. IV. Evolução em pacientes tratados e seus controles. Memórias do Instituto Oswaldo Cruz, 81: 53-60 (1986).
331. Satti, M. B., Tamimi, D. M., Al Sohuibani, M. O. & Al Quorain A. Appendicular schistosomiasis: a cause of clinical appendicitis? Journal of clinical pathology, 40: 424-428 (1987).
332. Scrimgeour, E. M. Non-traumatic paraplegia in northern Tanzania. British medical journal, 283: 975-978 (1981).
333. Scrimgeour, E. M. & Gajdusek, D. C. Involvement of the central nervous system in Schistosoma mansoni and S. haematobium infection. Brain, 108: 1023-1038 (1985).
334. Shaw, A. F. B. & Ghareeb, A. A. The pathogenesis of pulmonary schistosomiasis in Egypt with especial reference to Ayers's disease. Journal of pathology and bacteriology, 46: 401-424 (1938).
335. Sherif, M. A., Kamel, R., Habashy, A., Razik, E. A., Ammar, S. M. & Mahmoud, N. B. Study of value of needle liver biopsy in clinical assessment of patients with liver disease especially hepatic schistosomiasis. Journal of the Egyptian Society of Parasitology, 12: 327-340 (1982).
336. Sherif, M. A., Razik, E. A., Ammar, S. M., Esmail, A. K. & Kagan, I. G. Pathological and immunological study on bilharzial splenomegaly. Journal of the Egyptian Society of Parasitology, 12: 473-488 (1982).

337. Shikanai-Yasuda, M. A., Carvalho, S. A., Yasuda, P. H., Negro, G. D., Shiroma, M. & Neto, V. A. Salmonellosis associated with hepatosplenic schistosomiasis mansoni: treatment with praziquantel. Revista do Instituto de Medicina tropical de São Paulo, 27: 286-291 (1985).
338. Shoeb, S. M., Habib, M. A., El-Din, S. S., El-Zayadi, A., Abdel-Wahab, M. F., Massoud, A. F. A. F., Abdel-Azim, A. & Wahib, A. Ascites: a clinical, biochemical and immunological study. Journal of the Egyptian Society of Parasitology, 11: 137-146 (1981).
339. Siddorn, J. Schistosoma myelopathy. British medical journal, 2: 458-459 (1977).
340. Siddorn, J. A. Schistosomiasis and anterior spinal artery occlusion. American journal of tropical medicine and hygiene, 27: 532-534 (1978).
341. Sleigh, A. C., Hoff, R., Mott, K. E., Maguire, J. H. & da Franca Silva, J. T. Manson's schistosomiasis in Brazil: 11-year evaluation of successful disease control with oxamniquine. Lancet, i: 635-637 (1986).
342. Sleigh, A. C. & Mott, K. E. Schistosomiasis. Clinics in tropical medicine and communicable diseases, 1: 643-670 (1986).
343. Sleigh, A. C., Mott, K. E., Hoff, R., Barreto, M. L., Mota, E. A., Maguire, J. H., Sherlock, I. & Weller, T. H. Three-year prospective study of the evolution of Manson's schistosomiasis in north-east Brazil. Lancet, ii: 63-66 (1985).
344. Sleigh, A. C., Mott, K. E., da França Silva, J. T., Muniz, T. M., Mota, E. A., Barreto, M. L., Hoff, R., Maguire, J. H., Lehman, J. S. & Sherlock, I. A three year follow-up of chemotherapy with oxamniquine in a Brazilian community with endemic schistosomiasis mansoni. Transactions of the Royal Society of Tropical Medicine and Hygiene, 75: 234-238 (1981).
345. Smith, D. H., Warren, K. S. & Mahmoud, A. A. F. Morbidity in schistosomiasis mansoni in relation to intensity of infection: study of a community in Kisumu, Kenya. American journal of tropical medicine and hygiene, 28: 220-229 (1979).
346. Smith, J. H., Said, M. N. & Kelada, A. S. Studies on schistosomal rectal and colonic polyposis. American journal of tropical medicine and hygiene, 26: 80-84 (1977).
347. Smither, S. R. & Terry, R. J. The immunity of schistosomiasis. Advances in parasitology, 14: 390-422 (1976).
348. Sobh, M. A., Moustafa, F. E., El-Housseini, F., Basta, M. T., Deelder, A. M. & Ghoniem, M. A. Schistosomal specific nephropathy leading to end stage renal failure. Kidney international, 31: 1006-1011 (1987).
349. Souidan, M. Z., Shaker, A., El-Morsy, A. S., Soliman, A., Mousa, M. A. & El-Shafei, M. M. M. S. A study of small intestinal function histology and histochemistry in hepatosplenic schistosomiasis. Journal of the Egyptian Medical Association, 62: 119-146 (1979).
350. Stephenson, L. S. Schistosomiasis and human nutrition. Cornell international nutrition monograph series No. 16, pp. 1-21 (1986).
351. Strausbaugh, L. J., Farid, Z., Higashi, G. I. & Bassily, S. Renal amyloidosis with nephrotic syndrome in two patients with schistosomiasis mansoni and chronic salmonellosis. American journal of tropical medicine and hygiene, 27: 919-923 (1978).

352. Stuiver, P. C. Acute schistosomiasis (Katayama fever). British medical journal, 288: 221-222 (1984).
353. Sucupira, M. S. & Pupo, A. A. Hormonal studies of patients with schistosomiasis mansoni and delayed puberty and short stature. Revista da Associação Médica Brasileira, 22: 154-161 (1976).
354. Sukkar, M. Y., Ahmed, N. D. & Omer, A. H. S. Abnormal growth hormone release in bilharzial liver fibrosis. Annals of tropical medicine and parasitology, 73: 45-49 (1979).
355. Sukwa, T. Y., Bulsara, M. K. & Wurapa, F. K. Evaluation of selected symptoms in the diagnosis of Schistosoma mansoni infection. Tropical and geographical medicine, 37: 295-297 (1985).
356. Sukwa, T. Y., Bulsara, M. K. & Wurapa, F. K. The relationship between morbidity and intensity of Schistosoma mansoni infection in a rural Zambian community. International journal of epidemiology, 15: 248-251 (1986).
357. Sukwa, T. Y., Bulsara, M. K. & Wurapa, F. K. Reduction in prevalence, intensity of infection and morbidity due to Schistosoma mansoni infection in a community following treatment with praziquantel. Journal of tropical medicine and hygiene, 90: 205-211 (1987).
358. Takahashi, S., Dunn, M. A. & Seifter, S. Liver collagenase in murine schistosomiasis. Gastroenterology, 78: 1425-1431 (1980).
359. Teixeira, R., Bina, J. C. & Barreto, S. H. Bacteria infection of long duration due to genus Escherichia in a patient with S. mansoni. Revista médica da Bahia, 22: 70-74 (1976).
360. Thatcher, B. S., Fleischer, D., Rankin, G. B. & Petras, R. Duodenal schistosomiasis diagnosed by endoscopic biopsy of an isolated polyp. American journal of gastroenterology, 79: 927-929 (1984).
361. Thompson, H. T., Pettigrew, R. & Johnson, E. A. Solitary pulmonary bilharzioma. Thorax, 34: 401-403 (1979).
362. Tiboldi, T. Involvement of human and primate ovaries in schistosomiasis. A review of the literature. Annales de la Société Belge de Médecine tropicale, 58: 9-20 (1978).
363. Tiboldi, T. Ovaries and adrenals in murine schistosomiasis mansoni. I. Histopathological changes of the ovaries in acute and chronic infection. American journal of tropical medicine and hygiene, 28: 670-676 (1979).
364. Tiboldi, T., Colfs, B., de Smet, M. & van Soom, H. Ovaries and adrenals in murine schistosomiasis mansoni. II. Some observations on the function of the ovaries in acute infection. American journal of tropical medicine and hygiene, 28: 871-872 (1979).
365. Tiboldi, T., Smet, M., Colfs, B. & van Soom, H. Ovaries and adrenals in murine schistosomiasis mansoni. III. Morphology and function of the adrenals in acute infection. American journal of tropical medicine and hygiene, 28: 873-875 (1979).
366. Tosswill, J. H. C. & Ridley, D. S. An evaluation of the ELISA for schistosomiasis in a hospital population. Transactions of the Royal Society of Tropical Medicine and Hygiene, 80: 435-438 (1986).

367. Touze, P. J. E., Kacou, M., Bordahandy, R., Chauvet, J., N'dori, R. & Bertrand, E. Acute cor pulmonale in Schistosoma mansoni. Bulletin de la Société de Pathologie exotique, 77: 666-672 (1984).
368. Trangle, K. L., Goluska, M. J., O'Leary, M. J. & Douglas, S. D. Distribution of blood groups and secretor status in schistosomiasis. Parasite immunology, 1: 133-140 (1979).
369. Vadas, M. A., David, J. R., Butterworth, A. E., Houba, V., Sturrock, R. F. & David, L. Functional studies on purified eosinophils and neutrophils from patients with Schistosoma mansoni infections. Clinical and experimental immunology, 39: 683-694 (1980).
370. van Ee, J. H. & Polderman, A. M. Physiological performance and work capacity of tin mine labourers infested with schistosomiasis in Zaire. Tropical and geographical medicine, 36: 259-266 (1984).
371. Van Marck, E. A. E. The glomerulopathy associated with Schistosoma mansoni infection. An experimental study in the mouse. Chapter 1: Introduction. Schistosomiasis mansoni: antigens, circulating immune complexes, renal lesions. Acta Leidensia, 50: 1-20 (1983).
372. Van Marck, E. A. E., Deelder, A. M. & Gigase, P. L. J. Effect of partial portal vein ligation on immune glomerular deposits in Schistosoma mansoni-infected mice. British journal of experimental pathology, 58: 412-417 (1977).
373. Van Marck, E. A. E., Kesterns, L. & Deelder, A. M. Experimental liver pathology in schistosomiasis mansoni. Acta Leidensia, 49: 55-61 (1982).
374. Vanker, E. A. Aortic aneurysm caused by schistosomiasis. Thorax, 41: 890-891 (1986).
375. Veress, B., Musa, A. R., Osman, H., Asha, A., Saddig, E. W. & El Hassan, A. M. The nephrotic syndrome in the Sudan with special reference to schistosomal nephropathy, a preliminary morphological study. Annals of tropical medicine and parasitology, 72: 357-361 (1978).
376. Verkijk, A. Cytologic studies of the CSF in schistosomiasis. Clinical neurology and neurosurgery, 88: 67 (1986).
377. Vermund, S. H., Bradley, D. J. & Ruiz-Tiben, E. Survival of Schistosoma mansoni in the human host: estimates from a community-based prospective study in Puerto Rico. American journal of tropical medicine and hygiene, 32: 1040-1048 (1983).
378. Viggiano, M. G. C. & Leite, M. S. B. Placentite esquistossomotica. Jornal Brasileiro de ginecologia, 85: 273-278 (1978).
379. von Lichtenberg, F. Immunopathological mechanisms in parasitic infection with emphasis on schistosomiasis. Southeast Asian journal of tropical medicine and public health, 9: 186-204 (1978).
380. Warren, K. S. Modulation of immunopathology and disease in schistosomiasis. American journal of tropical medicine and hygiene, 26: 113-119 (1977).
381. Warren, K. S. Hepatosplenic schistosomiasis: a great neglected disease of the liver. Gut, 19: 572-577 (1978).
382. Warren, K. S. The pathology, pathobiology and pathogenesis of schistosomiasis. Nature, 273: 609-612 (1978).

383. Warren, K. S. The pathogenesis of hepatosplenic schistosomiasis: from man to monkey to mouse to molecule. Progress in liver diseases, 6: 439-455 (1979).
384. Warren, K. S. The relevance of schistosomiasis. New England journal of medicine, 303: 203-206 (1980).
385. Warren, K. S. Schistosomiasis: host-pathogen biology. Review of infectious diseases, 4: 771-775 (1982).
386. Warren, K. S. Immunology. In: Jordan, P. & Webbe, G., ed. Schistosomiasis, epidemiology, treatment and control, London, William Heinemann Medical Book Ltd, pp. 150-164, 1982.
387. Warren, K. S. The kinetics of hepatosplenic schistosomiasis. Seminars in liver disease, 4: 293-300 (1984).
388. Warren, K. S., Mahmoud, A. A. F., Cummings, P., Murphy, D. J. & Houser, H. B. Schistosomiasis mansoni in Yemeni in California: duration of infection, presence of disease, therapeutic management. American journal of tropical medicine and hygiene, 23: 902-909 (1974).
389. Watt, G., Long, G. W., Calubaquib, C. & Ranoa, C. P. Cardiopulmonary involvement rare in severe Schistosoma japonicum infection. Tropical and geographical medicine, 38: 233-239 (1986).
390. Webbe, G. Schistosomiasis: some advances. British medical journal, 283: 1104-1106 (1981).
391. Weisbrod, B. A. & Helminskiak, T. W. Schistosomiasis and agricultural labor productivity. Proceedings of the International Conference on Schistosomiasis, Cairo, 1975. 1: 37-40 (1978).
392. Weller, T. H. Manson's schistosomiasis - progress and continuing problems. South African medical journal, 70(Suppl.): 83-84 (1986).
393. Wellhausen, S. R. & Boros, D. L. Atrophy of the thymic cortex in mice with granulomatous schistosomiasis mansoni. Infection and immunity, 35: 1063-1069 (1982).
394. Wertheimer, S. P., Vermund, S. H., Lumay, L. H. & Singer, B. Lack of demonstrable density-dependent fecundity of schistosomiasis mansoni: analysis of Egyptian quantitative human autopsies. American journal of tropical medicine and hygiene, 37: 79-84 (1987).
395. Wiles, W. A. The aetiology of gross splenomegaly in Rhodesia and the significance of bilharziasis. Central African journal of medicine, 26: 3-5 (1980).
396. Winawer, S. J. & Miller, D. Screening for colorectal cancer. Bulletin of the World Health Organization, 65: 105-111 (1987).
397. Witham, R. R. & Mosser, R. S. An unusual presentation of schistosomiasis duodenitis. Gastroenterology, 77: 1316-1318 (1979).
398. World Health Organization. Measurement of the public health importance of bilharziasis. WHO Technical Report Series No. 349, 1967.
399. World Health Organization. The control of schistosomiasis. WHO Technical Report Series No. 728, pp. 28-33, 1985.
400. World Health Organization. Progress in assessment of morbidity due to Schistosoma haematobium infection: a review of recent literature. WHO/SCHISTO/87.91, 27 pp.

401. World Health Organization. Progress in assessment of morbidity due to Schistosoma japonicum infection: a review of recent literature. Tropical diseases bulletin, 85 (6): R1-R45 (1988).
402. Wyler, D. J., Wahl, S. M. & Wahl, L. M. Hepatic fibrosis in schistosomiasis: egg granulomas secrete fibroblast stimulating factor in vitro. Science, 202: 438-440 (1978).
403. Young, S. W., Higashi, G., Kamel, R., El Abdin, A. Z. & Mikhail, I. A. Interaction of salmonellae and schistosomes in host-parasite relations. Transactions of the Royal Society of Tropical Medicine and Hygiene, 67: 797-802 (1973).
404. Zakaria, S., El-Raziky, E. H., El-Kaloubi, A. H., Shaker, Z. A., Hunter, A., Ata, A. A. & El-Battawy, Y. Prevalence of HBsAg in schistosomiasis: B. Frequency in various stages of schistosomiasis. Egyptian journal of bilharziasis, 6: 11-19 (1979).
405. Zheng, J. S., Fu, F. Y., Yu, S. Z., Lu, G. H., Chen, W. Q. & Lu, S. C. Chronic cor pulmonale due to Schistosoma japonicum infection. Chinese medical journal, 94: 529-534 (1981).
406. Zimbalist, E., Gettenberg, G. & Brejt, H. Ileocolonic schistosomiasis presenting as lymphoma. American journal of gastroenterology, 82: 476-478 (1987).
407. Zuckerman, M. J., Goldfarb, J. P., Cho, K. C. & Molnar, J. J. An unusual pedunculated polyp of the colon: association with schistosomiasis. Journal of clinical gastroenterology, 5: 169-172 (1983).
408. Zuidema, P. J. The Katayama syndrome; an outbreak in Dutch tourists to the Omo National Park, Ethiopia. Tropical and geographical medicine, 33: 30-35 (1981).
409. Zuidema, P. J. Schistosomal polyposis coli in a migrant from Surinam. Acta Leidensia, 49: 31-39 (1982).

TABLE 1. RESULTS OF POPULATION-BASED EPIDEMIOLOGICAL STUDIES FOR S. MANSONI  
INFECTION FROM DIFFERENT COUNTRIES

Country	Population examined	Age group with peak prevalence-years (%)	Age group with highest infection intensity-years (mean epg)	Male/female prevalence rate	Reference
Brazil	417	20-24 (100)	10-14 (301)	0.9	Lehman et al., 1976 (232)
Brazil	777	15-19	15-19	1.1	Guimaraes et al., 1985 (182)
Egypt	8 712	11-15	11-15	-	El Alamy et al., 1977 (131)
Egypt	537	10-19 (87)	10-19 (581)	1.1	Abdel-Wahab et al., 1980 (10)
Ethiopia	343	10-14 (57)	10-14 (213)	1.5	Hiatt et al., 1976 (190)
Ethiopia	796	11-15 (70)	Male: 11-15 (180) Female: 6-10 (135)	1.7	Lemma et al., 1979 (234)
Kenya	416	10-19 (98)	Male: 20-24 (1 019) Female: 10-14 (1 026)	1.1	Arap Siongok et al., 1976 (34)
Kenya	1 393	60- (72)	0-4 (344)	1.2	Smith et al., 1979 (345)
Puerto Rico	907	15-19	20-29	1.4	Hiatt et al., 1980 (191)
Sudan	1 747	10-19	10-19	-	Omer et al., 1976 (282)
Uganda	705	20-29 (42)	20-29	1.1	Bukanya et al., 1986 (74)
Zaire	547	11-25 (100)	11-18	-	Gryseels et al., 1987 (179)

TABLE 2. RELATIONSHIP BETWEEN *S. MANSONI* INFECTION AND CLINICAL FINDINGS

Country	No. examined	Age (years)	Prevalence (%)	Correlation with infection or stool eggs per gram					Reference
				Abdominal pain	Diarrhoea	Blood in stool	Hepatomegaly	Splenomegaly	
Brazil	417	All	74	No	No	Yes <sup>a</sup>	Yes	Children: yes Adults: no	Lehman et al., 1976 (232)
Egypt	537	All	74	No	No	Yes	Yes <sup>b</sup>	No	Abdel-Wahab et al., 1980 (10)
Ethiopia	336	7-16	88	No	No	No	No	No	Hiatt et al., 1977 (192)
Kenya	416	All	82	Yes	No	Yes	Yes	Yes	Arap Siongok et al., 1976 (34)
Kenya	374	All	47	Yes	No	Yes	No	No	Smith et al., 1979 (345)
Liberia	184	6+	33	No	No	No	No	Yes	Holzer et al., 1983 (196)
Saudi Arabia	254	17-24	66	Yes	No	Yes	No	No	Gremillion et al., 1978 (175)
Sudan	1 747	All	48	No	Yes	Yes	No	No	Omer et al., 1976 (282)
Zaire	549	All	96	Yes	Yes	Yes	Yes	Yes	Gryseels et al., 1987 (179)
Zambia	703	5+	69		Yes	Yes	Yes	No	Sukwa et al., 1986 (356)

Note: <sup>a</sup> By occult blood test.

<sup>b</sup> But only in subjects aged <20 years.

TABLE 3. LOCATION OF COLONIC POLYPOSIS IN SCHISTOSOMIASIS  
DUE TO INFECTION WITH S. MANSONI

Investigator	No. of cases studied	Rectum	Sigmoid colon	Descending colon	Transverse colon	Ascending colon
Bessa et al. (59)	20	14	19	8	3	
El-Masry et al. (139)	108	108	108	70	23	2

TABLE 4. SYMPTOMS OF COLONIC POLYPOSIS IN SCHISTOSOMIASIS  
DUE TO INFECTION WITH S. MANSONI

Investigator	No. of cases studied	Mean age in years (range)	Bloody diarrhoea	Abdominal pain	Tenesmus	Abdominal mass
Bessa et al. (59)	20		20	13	13	13
Bessa et al. (60)	40	24 (17-45)	36	40	36	30
El-Masry et al. (139)	108	28 (10-59)	108			15

TABLE 5. COMPARISON OF PREVALENCES OF HEPATITIS B VIRUS ANTIGENAEMIA BETWEEN PERSONS WITH AND WITHOUT S. MANSONI INFECTION

Country	With <u>S. mansoni</u> infection				Without <u>S. mansoni</u> infection				Statistically significant	Reference
	Subjects	No. examined	No. (+)	%	Subjects	No. examined	No. (+)	%		
Brazil	Hospital patients	103 <sup>a</sup> 66 <sup>b</sup>	8	7.8	Blood donors	600	8	1.3	Yes No	241
Egypt	Hospital patients	167 <sup>c</sup>	22	13.2	Hospital patients	54	8	14.8	No	35
Egypt	Hospital patients	296	33	11.2	Blood donors	97	2	2.1	Yes	142
Egypt	Villagers	148	4	2.7	Villagers	150	5	3.3	No	202
Egypt	Hospital patients	916 <sup>c</sup>	67	7.3	Hospital patients	97	2	2.1	Yes	404
Kuwait	Hospital patients	26 <sup>a</sup>	13	50.0	Blood donors	97	4	4.1	Yes	18
Malawi	Hospital patients	49	7	14.3	Blood donors Students	96	3	3.1	Yes	265
Sudan	Hospital patients	20 <sup>a</sup>	6	30.0	Medical staff	41	6	14.8	Yes	107

Note: <sup>a</sup> Hepatosplenic schistosomiasis.

<sup>b</sup> Intestinal schistosomiasis.

<sup>c</sup> With S. mansoni and/or S. haematobium infections.