

Hepatitis C in Egypt

Zainab D. Mezban, MD and Adil Ed Wakil, MD



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The World Health Organization has declared hepatitis C a global health problem, with approximately 3% of the world's population (roughly 170-200 million people) infected with HCV. In the US, approximately 3 million people are chronically infected, many of whom are still undiagnosed. In Egypt the situation is quite worse. Egypt has a population of 62 million and contains the highest prevalence of hepatitis C in the world. The national prevalence rate of HCV antibody positivity was estimated by the Egyptian Ministry of Health (MOHP) in 1999 to be 18.9%. Since 25-30% of individuals clear the infection, the estimated adjusted national prevalence rate is 12% (or 7.2 million people) (MOHP, 1999). Interestingly, genotype 4 represents over 90% of cases in Egypt. Chronic HCV is the main cause of liver cirrhosis and liver cancer in Egypt, and indeed, one of the top five leading causes of death. In Egypt, the major route of exposure appears to be due to medical therapy and inadequate sterilization techniques and supplies. In addition to blood transfusions prior to 1994, the major risk factor associated with HCV infection is a history of antischistosomal injection treatment. Schistosomiasis is a common parasitic disease in Egypt acquired through swimming or wading in contaminated irrigation channels or standing water. Thus, farmers and rural populations are at greatest risk, and this is supported by the higher prevalence rate of HCV in the Nile delta and rural areas. Schistosomiasis can lead to urinary or liver damage over many years. Prior to 1984 the mainstay of treatment was intravenous tartar emetic. Widespread treatment campaigns were carried out in the countryside of Egypt in the 70's and early 80's. Needles were routinely recycled and not properly sterilized at that time due to cost and limited resources. Overall, despite improvement in schistosomiasis-induced morbidity this campaign set the stage for the current large hepatitis disease burden in Egypt. Further, with such a high prevalence rate, transmission of hepatitis C through unusual routes has become significant. For example, tattooing, circumcision or other medical procedures performed by non-medical personnel are more common routes of infection in Egypt than elsewhere. In addition, household transmission, vertical and sexual transmission routes are also under investigation.

As expected, the availability and cost of treatment for hepatitis C in Egypt is quite prohibitive. Although the most common methods of previous hepatitis C transmission (injection-based treatment for schistosomiasis and blood transfusions) have been addressed, the prevalence in those under age 20 is still approximately 10%, demonstrating the continued presence of significant hepatitis C transmission in modern-day Egypt. Egypt is in need of additional training, funding and research in order to combat the hepatitis C epidemic.

Sustainable Sciences Institute (SSI) is a nonprofit organization founded by Dr. Wakil and colleagues to assist researchers in developing countries with skills and resources so they might better address local public health needs. SSI has established a program focusing on hepatitis C in Egypt. We have been working together with Egyptian colleagues to establish consensus regarding the current hepatitis C situation and a research agenda for the future. Providing journals, textbooks, and up-to-date information on hepatitis C and research techniques is also a priority.

SSI recently conducted a two-week workshop in Egypt from September 28th through October 10th, 2002 in collaboration with the National Hepatology and Tropical Medicine Research Institute. The workshop trained a total of 49 participants from different disciplines from research, clinical, and epidemiological disciplines. Dr. Mohamed Abdel-Hamid, who was involved in coordinating the workshop, stated that "participants are telling me that this is the best workshop they have ever attended." The workshop included lectures, group discussions, and most importantly hands on training of laboratory techniques and research methods.

Participants are currently developing full project proposals for review, and ultimately, pilot grants will be awarded. These efforts of collaboration with local experts and the enhancement of training and funding will, hopefully, make a difference in Egypt's struggle to address the hepatitis C burden.

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