

Improving care of patients with chronic hepatitis B infection in Senegal through training of key personnel



Figure 1: Fann and Principal University Hospitals, Dakar, Senegal

Context

Hepatitis B virus (HBV) infection is the most important cause of liver cirrhosis and cancer in the world and its burden is especially high in West Africa. More than 10% of the Senegalese population has a chronic HBV infection and up to one-half of these individuals might need antiviral therapy. The World Health Organization recommends HBV screening for the general population in high-prevalence countries. As an increasing number of individuals will be diagnosed with chronic HBV infection in West Africa in near future, it is urgent for countries like Senegal to have access to the diagnostic tools necessary for assessing treatment eligibility. Currently, availability of liver biopsy, transient elastography or ultrasonography remains very limited in the region and few physicians have been trained to perform these measurements. Recently, tenofovir, the standard of care for HBV infection, became available for HBV therapy at a reduced cost, with the support of the Senegalese Ministry of Health (MoH). Thus, every HBV-infected individual with a treatment indication could potentially have access to adequate antiviral therapy soon, which stresses the need for improving infrastructure and training of health care workers to assess HBV treatment eligibility.

The proposed project follows a successful Esther Switzerland start-up project, which allowed the organization of a workshop in March 2017 in Dakar. Discussions with important stakeholders in the field of HBV clinical management and health policy allowed us to identify barriers to the optimal HBV care in Senegal. As access to liver disease staging tools was seen as a major challenge in this setting, we designed a project targeted at the improvement of diagnostic skills and capacity. Taking advantage of the Certificate of Advanced Studies in Hepatology, University Bern (CAS HEP Unibe) program, we aim at training Senegalese clinicians in viral hepatitis management. These HBV experts will in turn train young clinicians in Dakar and help build an HBV center of excellence. The availability of diagnostic tools such as a liver ultrasound can only lead to the improvement of the quality of care and better health outcomes if highly trained physicians use them. Investing in the training of expert clinicians is cost saving, sustainable and is one of the cornerstones of strategies aiming at improving the quality of care in sub-Saharan Africa.



Project description

The overall goal of this project is to improve HBV management capacity and quality in public clinics in Dakar, Senegal, by developing a training institutional partnership. This strategy will allow the establishment of a liver disease clinical platform with access to optimal diagnostic tools. In order to achieve this goal, our activities will focus on the following steps:

Training of clinical experts: Two Senegalese medical fellows will take part in the “CAS HEP Unibe” program in Bern. At the end of their training, they will be able to manage patients with common hepatologic diseases, especially chronic HBV infection. They will also have received training to perform liver ultrasonography, including hepatocellular carcinoma (HCC) screening, and transient elastography. Each module of the course ends with a test and if all are completed successfully, a “CAS HEP Unibe” is awarded to the candidate.

Knowledge transfer in Senegal: During the second half of the project, the trained experts will teach local physicians about HBV management and train them in performing TE measurements to stage liver fibrosis and liver ultrasonography to explore liver-related complications. Knowledge transfer will occur through workshops, lectures and clinical supervision. At the end of the grant period, each HBV expert will have successfully trained three colleagues at the home institution in Dakar. The progress of the training process will be supervised and monitored by Prof. Semmo and Dr. Wandeler, who will visit the clinical centers in Dakar and assess the trainees’ proficiency in performing these procedures.

Development of a clinical database: During the development phase, weekly teleconferences with the IT team in Dakar, as well as members of the clinical data working group will be organized. A pilot testing phase will be implemented during the second half of the grant period. The main purpose of the database will be to gather information on the number, type and accuracy of diagnostic procedures performed, and to monitor liver disease burden and HBV antiviral therapy eligibility in the clinical settings.

Intensifying dialogue with Senegalese Ministry of Health (MoH): We aim to foster a long-term relationship with the Senegalese MoH in order to streamline HBV screening and management in Dakar. The MoH is very enthusiastic about developing a strong collaboration between public health authorities, clinicians and civil society with the aim of improving HBV care in Senegal.

Partnership

This project builds on a recently established partnership between the two following institutions:

- Bern University Hospital, Switzerland, represented by the Department of Infectious Diseases (Dr. G. Wandeler, Prof. A. Rauch) and the Department of Hepatology (Prof. JF. Dufour, Prof. N. Semmo). Both clinics are referral centers with outpatient clinics, each including 800-1,000 HIV-infected and HBV-infected patients, respectively.
- Dakar University Hospital, Senegal, represented by the Department of Infectious Diseases at Hôpital Fann (Prof. M. Seydi, Prof. L. Fortes) and the Department of Gastroenterology and Hepatology at Hôpital Principal (Prof. F. Fall). Both clinics are the largest referral tertiary care infectious diseases and hepatology units in the country and important training centers for medical fellows across West Africa.

Dr. G. Wandeler was partially based at Fann University Hospital in Dakar during 4 years (2012-2016), where he provided clinical, academic and research support to the above mentioned clinics. With funding from the Swiss National Science Foundation, the US National Institutes of Health and the French National AIDS Research Agency, Dr. Wandeler, Prof. Seydi, Prof. Fall and collaborators from Bordeaux (Prof. Dabis, Dr. Jaquet) developed a comprehensive research and training platform on HIV and viral hepatitis infections in Dakar. The main aim of these activities was to improve key aspects of viral hepatitis management in Senegal:

screening and linkage to care of diagnosed patients, pre-treatment assessment of liver diseases, access to treatment, clinical monitoring, and evaluation of outcomes. Knowledge transfer, training, advocacy and improvement of the infrastructure for the optimal management of HBV infection are key aspects of this partnership.



Figure 2: Viral hepatitis interest team in Senegal during the start-up meeting in March 17, Dakar, Senegal

Timeframe

Jan-Jun 18	Training of clinical experts in Bern
Jan-Jun 18	Designing and finalizing of the clinical database
Jul-Sept 18	Knowledge transfer/training of medical staff by clinical experts
Oct-Dec 18	Integration of new diagnostic methods and clinical skills into routine clinical care
Jan-Dec 18	Advocacy and strategic exchange with Senegalese public health authorities
Nov-Dec 18	Project evaluation
Dec 18	Writing of final report

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