



Report on the Mycetoma Medical & Health Mission to Wad Onsa village, Sennar State 15th-18th October 2019

Background

The Mycetoma Research Centre (MRC), University of Khartoum, WHO Collaborating Centre on Mycetoma in collaboration with Brighton and Sussex University, the Association of Aid & Relief-Japan (AAR) and the Institute of Endemic Diseases (IED), University of Khartoum, had conducted a field study to Wad Onsa village in the period 15th and 18th October 2019.

Mission Team:

- Prof. Ahmed Hassan Fahal, Professor of Surgery, the Mycetoma Research Centre, University of Khartoum. Khartoum, Sudan.
- Prof. Satoshi Kenako, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan.
- Dr. Suguru taga, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan.
- Dr. Sahar Mubarak Bakhiet, Head of Molecular Biology Department, The Institute of Endemic Diseases, University of Khartoum, Khartoum, Sudan.
- Dr. Elsamani WadAllah, Consultant Surgeon, the Mycetoma Research Centre, University of Khartoum. Khartoum, Sudan.
- Dr Abdelrahman Mohamed, Surgical Registrar, Soba University Hospital, University of Khartoum, Khartoum, Sudan.



- Dr Roua Fath EL Rahman, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Mr. Emmanuel Edward Siddig, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Dr. Rayan Saif Eldin, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Dr. Osama Alhadi, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Dr. Batoul Ali Eltayb, Research follow, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Dr. Dania Mohamed Ibrahim, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Mr. Abanoub Mahir Adrieb, Research Assistant, The Mycetoma Research Centre, University of Khartoum.
- Miss. Hiba Baderden Kamal, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Mr. Mahmoud Mohamed, Research follow, Research Assistant, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.
- Miss. Hanan Fadal, Association for Aid and Relief, Japan
- Mr. Abdel Razig Abdulla, Senior Nurse, The Mycetoma Research Centre, University of Khartoum, Khartoum, Sudan.



Mission Objectives:

- 1- to diagnoses 503 suspected Mycetoma patients identified in the previous survey conducted in June 2019 in Eastern Sennar Locality.
- 2- to conduct mycetoma health education and advocacy session for the community.
- 3- to conduct an epidemiological and genetic study on mycetoma in the locality.

The mission activities:

- 1- Clinic for mycetoma patients

A clinic was set at Wad Onsa Regional Mycetoma Centre at Wad Onsa village, Eastern Sennar Locality for the diagnosis and management of patients. The total number of mycetoma suspected patients seen at the clinic was 250 patients. All of them had lesion ultrasound examination, of that 112 patients had evidence of mycetoma, 65 patients had foreign body granuloma, 38 patients had corns or dermal thickening, 13 patients had lipomas, sebaceous cysts or other cysts, 15 patients had evidence of healed mycetoma with no evidence of recurrence, and 7 patients had other conditions.

Thirty-five patients underwent tru-cut biopsy, and 29 patients had fine-needle aspiration for cytology. All surgical biopsies and aspirates were sent to the Mycetoma Research Centre for histopathological examination and grains culture. The clinical diagnosis of mycetoma was confirmed in 14 patients out of them 11 patients had PCR evidence of *Madurella mycetomatis* and three patients were ITS positive for fungal organisms but negative to *Madurella mycetomatis* indicating other fungal mycetoma causative organisms.



Some patients were booking for surgery at Wad Onsa Regional Centre at mid-December, some were referred to Mycetoma Research Centre or Sennar Teaching Hospital for further management. All patient had free diagnosis and treatment.

1. clinical examination of patients at the clinic





2. Ultrasound examination of the suspected lesions

Two hundred fifty lesions ultrasound examinations were conducted during the mission.





3. Mycetoma health education and advocacy:

Several health education sessions were conducted, and health education material in the form of note-books for the pupils, leaflets and posters were distributed to the villages' population, and that was kindly donated by AAR.





4. Research on the genetic susceptibility to Mycetoma:

As part of the genetic susceptibility to mycetoma, families with mycetoma patients were interviewed to build the pedigree for better understanding of the familial inheritance.





5. Environmental isolates metagenomics survey me

Prof. Satoshi Kenako and Dr. Suguru taga from the Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan had conducted an environmental survey for mycetoma causative organisms using metagenomics technique as a piolet study for future collaborative research. They survived eight villages in the locality, and from each village, ten soil samples were taken from different points, and the coordinates of the points were taken.





Acknowledgement:

- The mission was only being possible through the joint collaboration between the Sennar Health Authority, Soba University Hospital, the local community leaders and MRC.
- The contribution of the Association of Aid & Relief-Japan (AAR) is highly appreciated
- NIHR Global Health Research Unit - Global Health and Infection Department. Brighton and Sussex Medical School for their contribution in supporting Dr. Roua Fath EL Rahman, PhD student at Sussex University based at the Mycetoma Research Centre, Khartoum, Sudan.

