

# **Thesis Title: A Comparative Descriptive Study of Visceral Leishmaniasis between Patients Attending a Hospital and Non-Hospitalized Patients Found after Active Case Finding at Trishal, in Bangladesh**

**Key words:** Visceral Leishmaniasis, Trishal Thana, Trishal Thana Health Complex, rK39 dipstick test, Active cases.

Jahanara Khatun, Presber Wolfgang, Mondal Dinesh

Charité Universitätsmedizin Berlin, Freie Universität and Humboldt - Universität zu Berlin, 2010.

## **Abstract**

Visceral Leishmaniasis (VL), or kala-azar (KA), is an endemic disease with great public health implication in certain rural communities of Bangladesh. It is characterized by irregular fever, substantial weight loss, hepatomegaly and anaemia etc. If left untreated, the fatality rate in developing countries can be as high as 100% within 2 years. Bangladesh is one of the typical places for VL and the disease was first described in 1824 in Jessor district, Bangladesh. The objective of this study is to determine demographic features, knowledge, and perceptions of the patients who were admitted at Trishal Thana Health Complex (TTHC) and Non-Hospitalised village VL patients in Trishal and to identify the prevalence rates based on active and passive case detection.

A comparative study was conducted in the rural areas of Trishal Thana and at TTHC, Mymensingh. Study population were divided into 2 groups. The first group was

diagnosed with VL, who was admitted at the TTHC from 1<sup>st</sup> January to 24<sup>th</sup> February, 2010. The second group of population had been randomly selected from 6 villages of Trishal Thana at the same period. Patients' interviews were performed with a multiple choice standard questionnaire after taking their proper consent.

A total of 90 VL cases were reported in this study: 71 were hospitalized cases and 19 were non-hospitalized out of actively found 30 suspected cases. Besides, there were 20 more suspected cases who did not visit hospitals for various reasons. All patients were diagnosed clinically and using the rK39 dipstick test. Splenic aspiration had not been found from any of them. For comparative findings, female sex ( $p=0.017$ ), young age category ( $< 0.001$ ), low level of education ( $p < 0.05$ ), large number of family member ( $< 0.001$ ), and the presence and type of cattle shed ( $0.085$ ,  $p < 0.01$ ) are the risk factors to get VL in both groups but were more prevalent in non hospitalized patients.

The study demonstrated that most of the hospitalized patients were more aware about the disease than the non-hospitalized patients and the statistical difference was found significant ( $P < 0.05$ ). The study recommends educational campaign for both community people and health workers to increase knowledge about VL.

Surprisingly, 93% hospitalized respondents answered that VL could affect their social life. 45.5% cases believed that it would be very difficult for woman to get married if she or her family member gets VL. 27.3% mentioned that affected children cannot go to the school or play with other children. On the other side, non-hospitalized patients had mostly emotional answers like "We are very poor, don't have any quality" (40.2%) and/or "If we are infected with any disease or VL then society would not be affected and/or would not face any problem for us" (32%). Moreover, the majority of the non-hospitalized patients felt that VL affects them psychologically. More than 70% of non-hospitalized cases would like to visit indigenous healer for treatment since they have great faith for traditional healer while having little or negative faith for hospital.

Out of 71 hospitalized cases, 32 were from the six villages where total population was 34,647 and the calculated prevalence was 9/10000. By visiting those villages, the study found additional 19 VL cases. Thus the total prevalence was calculated 14/10000. The data indicates about 40% VL cases were not willing to go the hospital within the study period. If all the suspected VL cases from the field survey could be tested, the percentage of non-hospitalized cases could even be higher.

In summary, the study underlines the fact that the estimation based on passive case finding underestimates the true prevalence of VL in Trishal Thana, Mymensingh, Bangladesh. It is of high importance to know that active case detection can give a more realistic scenario of the prevalence. Our study data suggest a basis for further research and to strengthen the locally adapted VL elimination program. In addition to case detection, the information/research will help to enhance the knowledge of health care providers, health volunteers, and the community people.