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Exploring the incidence trends of tuberculosis: An integrated study of orphan children of Azad Jammu and Kashmir, Pakistan

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Pakistan is a developing country and falls fifth among the 22 countries with highest incident TB cases. Orphan children constitute a high risk group for tuberculosis infection owing to their poor socio-economic status. Our study included 1708 children, which were analyzed during four years. First round of screening was carried out in 2011 involving 733 children from seven districts of AJK and three years later, 975 unrelated children were investigated. The antibody positive subjects were subjected to sputum smear and PCR test to confirm the active tuberculosis. Major risk factors and values of plasma markers in diseased participants were also assessed. In 2011, an overall 5.18% seroprevalence and 3.41% active tuberculosis was found. Females with 3.13% seroprevalence and 2.05% active infection indicated higher infection rate as compared to the male children by 2.05% and 1.36% respectively. In 2014, we found 2.77% and 1.95% antibody positive and active tuberculosis cases respectively. The infected females included 1.64% and 1.12% and males included 1.13% and 0.83% positive for antibody and active TB. The infected children had an overall elevated plasma values for lymphocytes, granulocytes, relative volume of platelet PCT%, mean corpuscular hemoglobin concentration MCHC and red cell distribution width RDW. However, a decrease was observed for mean corpuscular volume MCV, haematocrit HCT, blood calcium and body mass index of infected subjects. A general decline in tuberculosis during four years is indicated in a high risk group that can be attributed to the improvement in the overall living and medical facilities in the recent years. This declining trend is suggestive of further studies encompassing more risk groups in order to gauge the overall trend of tuberculosis in Pakistan.

Biography

Madiha Khalid has completed her MPhil from University of Azad Kashmir, Muzaffarabad, AJK, Pakistan in Biotechnology. Human Molecular Biologist with 3 years national, international research experience in Human Molecular biology. Currently, she is working as a lecturer in the department of Biotechnology, Women University of AJ&K, Pakistan.