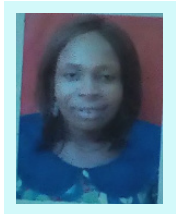


Under Diagnosis of Zoonotic Tuberculosis in Nigeria: Challenges and the Way Forward

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COLUMN ARTICLE

Tuberculosis is a life-threatening disease and a major public health hazard globally especially in Nigeria. Considering the population with vast socio-economic diversification in geography and language contributes to the rapid transmission of tuberculosis within the people having arid to humid equatorial climate. It is Africa's most populous country signified by industrialization and wide commercial life. It is obvious that zoonotic tuberculosis, one of the tropical diseases that threatened the human race has not been eradicated owing to the fact that residents depend on livestock as a major source of protein all over the country [1]. Majority of the cattle producers and herd's men in the country mostly do not have formal training hence lacks proper knowledge on the route of infection [2].

Zoonotic tuberculosis otherwise known as bovine TB is an undermined tropical disease caused by *Mycobacterium bovis* among the *Mycobacterium tuberculosis* complex. Humans contact the disease from infected animals through ingestion of raw milk and inhalation of aerosols produced by infected animals. Settlements where consumption of unpasteurized milk is practiced is at major risk of the disease. Occupational hazards resulting from cohabitation with in-

fectured animals by herd's men, consumption of uncooked or improperly cooked meat and unpasteurized milk with inhalation of aerosols are strong risk factors for the disease [3]. Others are poor health seeking habit of abattoirs, slaughtering of animals with bare hands, absence of informed education, absence of facilities and technology to diagnose the disease quickly, lack of trained human resource and expertise and absence of food safety hygiene.

Diagnosis of bovine tuberculosis generally had been epileptic in Nigeria as a result of lack of funds, manpower, infrastructure, technical know how and knowledge gap not until the recent intervention of foreign partners. Nevertheless, diagnosing and treating zoonotic tuberculosis is low compared to other forms of tuberculosis. There is no diagnostic gold standard of identifying *M. bovis* infected animals. Identification of the bacterium by cultural characteristics is challenging and molecular means is cost implicating and widely unavailable. Therefore, a quick way of isolating and identifying *M. bovis* is simply by culturing a clinical sample from an infected person in Lowenstein Jensen's (LJ) slop. *M. bovis* can be isolated from LJ slop with pyruvate which can be sub-cultured onto LJ with Nitrate and reduced to nitrite with the Griess reagent by a red to purple colour formation. *M. bovis* is however negative for Griess reagent [4].

Controlling the transmission of the disease, testing, controls, slaughtering, strongly and diagnosing is by post-mortem meat inspection, farm visits, testing of cattle, isolation of infected animals, movement controls and supervision by veterinary professionals during slaughtering of animals. Proper pasteurization of milk at the appropriate temperature that will kill the bacteria is strongly advocated. A national algorithm for identifying and diagnosing infected humans and animals will be of immense help.

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