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## Molecular identification of *Mycobacterium tuberculosis* transmission between cattle and man: A case report

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The study describe a case of transmission of *Mycobacterium tuberculosis* (*M. tb*) infection from a man to cattle in a farm in Gombe State, North east, Nigeria. *M. tb* was isolated from the bronchial lymph nodes of a 2 year old heifer that reacted strongly positive to caudal fold intradermal tuberculin test but showed no gross pathological lesions at slaughter. The cattle attendant reported to hospital sick and was diagnosed smear sputum positive and he died at the time when the heifer was diagnosed as *M. tb* infected. The owner's sputum and the heifer's bronchial lymph nodes were all cultured on Lowenstein Jensen media containing both pyruvate and glycerol. The isolates obtained were Ziehl Neelsen stained in order to obtained smear positives. The smear positive isolates were then subjected to Bionline (SD TB Ag MPT64 Rapid) assay to differentiate them in to *Mycobacterium tuberculosis* complex (MTBC) and environmental Mycobacterium. The MTBC were further subjected to PCR technique using GenoType MTBC technique to differentiate them into their various species. It was found that both the isolates from the man as well as that of the heifer were *M. tuberculosis* species, it was then concluded that there was a possibility of an anthrozoonotic transmission. Further studies using VNTR and spoligotyping is herby suggested.

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## Clinical case of acute equine piroplasmosis in a horse in Malaysia

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This is the first report on acute equine piroplasmosis in a horse in Malaysia. A 20 years old thorough bred mare, weighing 350 kg, used for sport showed clinical signs likewise anorexia, emaciation, nervousness, fever (40.1°C), congested mucous membranes with petechial haemorrhages on 3rd eyes lid and conjunctiva, difficulty in movement with muscular rigidity, in-coordination, ataxia, oedema on the fetlock joint of the hind limbs and hemoglobinuria, increase respiratory rate, heart rate and capillary refilling time. Haematology revealed decrease in total erythrocyte count, haemoglobin concentration, packed cell volume, thrombocytes, mean corpuscular volume and mean corpuscular haemoglobin concentration reflecting to microcytic hypochromic type of anaemia. Whereas, there is increase in erythrocytes sedimentation rate and reticulocytosis. The total white blood cells count was increased due to neutrophilia and lymphocytosis. The serum biochemical analysis reflect an increase in aspartate amino transferase, alanine amino transferase, alkaline phosphates, blood urea nitrogen and total bilirubin. Moreover, there was decrease in the total protein albumins and globulins, calcium, phosphorous, glucose and creatinine. Thin blood smear stained with 10% Giemsa was positive for *Theileria equi* and *Babesia caballi* with parasitemia of 18.2%. Competitive ELISA assay on the horse sera test was indicative and confirmative to antibodies against *Theileria equi* and *Babesia caballi*. Multiplex PCR assay was positive for *T. equi* and *B. caballi*. The horse was euthanized after asking the owner's permission and post mortem was performed. The gross morphology appears general cachexia, yellowish discolouration of subcutaneous tissue, pulmonary tissue at the cardiac lobe of left lung was congested with multiple solid discrete prominent nodules scattered on the surface of the lobe adjacent to pinkish white emphysematous focal lesions. The heart was enlarged covered by massive amount of pericardial fat, coronary and aortic mucosa were icteric. The spleen and liver were highly enlarged splenomegalic and hepatomegalic. Both Kidneys were enlarged, pale to red-brown coloured. The urinary bladder was full with dark coloured urine (coffee like). Small and large intestine was suffering catarrhal enteritis, petechial haemorrhage and ecchymosis detected in various parts of the GI tract. Distinct microscopic tissue alterations were observed in brain, heart, lung, liver, spleen, lymph nodes and kidneys.

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