IDENTIFICATION OF *Mycobacterium tuberculosis* IN AN OUTBREAK OF TUBERCULOSIS INFECTION OF A *Cebus apella* MONKEY'S COLONY[1]

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ABSTRACT: The standard and recommended methodology was used to identify *Mycobacterium tuberculosis* in the lungs and lymph nodes of two adult animals on an outbreak of tuberculosis that occurred in a *Cebus apella* monkey's colony of a research institution. Strict sanitary control in the admittance and management of animals is suggested to prevent outbreaks of diseases such as tuberculosis.

INDEX TERMS: *Mycobacterium tuberculosis*, Non Human Primates, Tuberculosis, Zoonosis

IDENTIFICAÇÃO DO *Mycobacterium tuberculosis* COMO AGENTE DE UM SURTO DE TUBERCULOSE EM UMA COLÔNIA DE MACACOS *Cebus apella*

RESUMO: Identificação de *Mycobacterium tuberculosis* como agente de um surto de tuberculose em uma colônia de macacos *Cebus apella*. Empregando-se metodologia recomendada foi identificado *Mycobacterium tuberculosis* nos linfonodos e pulmão de dois animais adultos em surto de tuberculose que ocorreu em uma colônia de macacos *Cebus apella* de uma instituição de pesquisa. É enfatizado rigoroso controle sanitário na triagem e criatório dos animais para a proteção da colônia e das pessoas envolvidas nas atividades da mesma. .

TERMOS PARA INDEXAÇÃO: *Mycobacterium*, Primatas não Humanos, Tuberculose, Zoonose.

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Tuberculosis is one of the most important non-human primate infectious diseases (TARARA et al, 1985; JANSSEN et al, 1989; MAHANTA et al, 1994). It has a major importance in monkeys kept in captivity because of their high susceptibility to the infectious agents (WILSON et al, 1984; DANNEMBERG; COLLINS, 2001; MASLOW et al, 2003) and the zoonotic risk (ACHA; SZYFRES, 1986; DALOVISIO; STETTER; MIKOTA-WELLS, 1992).

Mycobacterium tuberculosis, *M. bovis* and even *M. avium* are the principal agents of this highly infectious disease in monkeys (SAPOLSKY; ELSE, 1987; STETTER et al, 1995; HEARD; GINN; NEUWIRTH, 1997). Due to frequent exposure, man, other non-human primates and cattle are the major sources of this monkey disease (FRANCIS, 1958; DILLEHAY; HUERKAMP, 1990; O'REILLY; DABORN, 1995).

To determine the agent of a tuberculosis outbreak in a monkey colony, small pieces of lung and respiratory lymph nodes of an adult animal and lung of another animal, both sacrificed, were collected and submitted to isolation in a Lowenstein – Jensen medium (CENTRO PANAMERICANO DE ZOONOSIS, 1979, 1985).

An strain was submitted to the tests indicated in Table 1, according recommended procedures (ESTADOS UNIDOS, 1993; BRASIL, 1994) carried out in Mycobacteriology Department of Adolfo Lutz Institute, São Paulo/Brazil, showing that *Mycobacterium tuberculosis* was the agent of the outbreak.

Table 1 – Identification of M. tuberculosis in lymph nodes and lung of monkeys from a Cebus apella colony.

Assays	**Results**
Time of growth at 37°C	Slow
Production of pigment	Negative
Niacin	Negative
Nitrate	Positive
Catalase at 68°C	Negative
Arilsulfatase	Negative
Pirazinamidase	Positive
Tween 80	Positive
NaCl 5%	Negative
Tiofen –2 carboxylic acid hidrazida (TCH)	Resistant
Sensibility to Isoniazida (INH)	Sensitive

These results confirmed that monkeys are very susceptible to tuberculosis, which is a disease very common in animals kept in captivity (CALLE; THOEN; ROSKOP, 1989; MAHANTA et al, 1994; O'REILLY; DABORN, 1995; STETTER et al, 1995; WILSON et al, 1984). Tuberculosis has already been observed in orangutan, wild baboons and Tibethan macaque (KEHOE; PHIN; CHU, 1984; TARARA et al, 1985;JANSSEN et al, 1989). According to Francis (1958) 78% of tuberculous bacilli from captive monkeys are of human origin; in addition Thoen (1977) found that 21 out of 99 mycobacterial strains from captive monkeys are also of *M. tuberculosis*, the organism which was isolated in that study and by other workers (KEHOE; PHIN; CHU, 1984; TARARA et al, 1985; JANSSEN et al, 1989).

Strict sanitary control admittance and management is recommended to protect the animals and colony workers.

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