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Screening for tuberculosis in Egypt using recent techniques

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Microbiology

(Bacteriology, Immunology and Mycology)

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Key Words: (*Mycobacterium* - *Mycobacterium tuberculosis* - *Mycobacterium bovis* - tuberculin skin test; BoviGam®; γ -IFN- ELISA-QuantiFERON®).

Abstract:

In this study, a total of 5700 cattle, represented different 15 dairy farms, were examined by single intradermal comparative tuberculin skin test (SICTT). Both positive and suspected animals were tested by interferon gamma (γ -IFN) assay. Our finding revealed very high correlation between SICTT and γ -IFN testing results where γ -IFN showed 98.3% positive out of total 121 animals were positive for SICTT. Moreover, 35 animals that were suspected by SICTT, demonstrated positive results in 33 animals (94%) when their sera tested for γ -IFN. Interestingly, these suspected animals when retested by skin test after 60 days; they showed 30 positive reactor cattle.

The suspected patients showed that 29 out of 96 cases (30%) were positive by skin test. While 25 (26%) and 21 (22%) and 26 (27%) were positive when the suspected patients were examined by γ -interferon test in their blood and direct microscopic examination for *Mycobacterium* in their sputum samples, and bacteriological examination respectively. thereby, it was concluded that the interferon gamma (IFN- γ) test is an additional tool for diagnosis of tuberculosis (TB) in cattle and human. It may help to minimize dissemination of infection, which could be resulted when keeping many suspected animals for months until testing after two months later. When used in combination with the tuberculin test, the increased sensitivity of the IFN- γ test may enable the number of repeat tests to be reduced.

DEDICATION

To the soul of My Mother

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