The use of gastric aspirates as a specimen of choice in pulmonary tuberculosis diagnosis on children from 0-11 years

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Background: Yearly about 9 million people develop tuberculosis (TB), of which about 1 million cases occur in children less than 15 years. The diagnosis of tuberculous disease in children remains a challenge. Children with pulmonary tuberculosis are mostly unable to produce sputum therefore gastric aspirates (GA) remain the procedure of choice for microbiologic confirmation of tuberculous disease; however, yield is frequently low.

To evaluate the use of gastric aspirates as the specimen of choice in diagnosis of pulmonary tuberculosis in children of 0-11 years of age in NHLS Free state.

Methods & Materials: Retrospective study was conducted on 508 Gastric aspirates specimens submitted to NHLS from January 2012 to April 2013 from children ≤11 years of age suspected of having pulmonary tuberculosis. Of the 508, (45%) were females while (55%) were males. The laboratory results (direct microscopy and culture) were retrieved from NHLS DISA and reviewed

Results: Among the 508 children’s gastric aspirates specimen submitted to NHLS for TB diagnosis; six specimens were positive in direct microscopy (Auramin phenol staining) and eight had a positive culture. Only two specimens were both culture and direct microscopy positive. Among the 10 specimen that were positive by culture, eight were drug susceptible while two were multidrug resistant (MDR).

Conclusion: Data presented here indicates that, in this laboratory, Gastric aspirates analysis did not significantly contribute in the laboratory diagnosis of pulmonary tuberculosis in children. Therefore the use of special bicarbonate tube or cup was advised in GA collection. If not available the laboratory must neutralize the stomach acid with sodium bicarbonate within 30 minutes as recommended in standard Laboratory Procedure in order to improve the yield

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