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Abstract (oral session)

A comparative analysis of different modalities in the diagnosis of cryptococcal meningitis at a tertiary care centre in India

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Objectives: To compare and analyze the various methods in the diagnosis of Cryptococcal Meningitis (CM) in patients admitted at a tertiary care hospital. **Methods:** A cross-sectional study was conducted over a period of 8 months, between December 2011 to July 2012. Patients admitted in the indoor facility of Department of Medicine of LNJP hospital having features of chronic meningitis were evaluated with detailed history, clinical examination and investigations. Diagnosis of CM was based on the positive results of gram stain, India Ink preparation, culture, latex agglutination or PCR from CSF. A total of 110 patients met the enrolment criteria of chronic meningitis, which included varying combinations of symptoms like headache (n=83), altered mental status (GCS <14, n=52) or vomiting (n= 43) of sub-acute onset lasting 4 weeks or more. **Results:** 17 patients (all HIV positive) were diagnosed to have CM. Latex agglutination was positive in 100% of these cases, India Ink in 9(53%) and culture in 8(47%) patients. Direct gram stain from CSF in 2 (11.7%) patients showed Cryptococci. PCR from CSF was standardised and it was found to be positive in all 17 (100%) patients. All patients with positive India Ink had positive cultures except one. The sensitivity of PCR and latex agglutination were the highest, followed by India Ink and culture. On comparing the proportions based on the diagnostic tests on the study subjects using McNemar's test, the results were found to be statistically significant (p value < 0.05). **Conclusion:** In early stages of CM, when the organism count is low and hence not detectable in India Ink or culture, latex agglutination for Cryptococcal antigen and/or PCR from CSF may aid in the diagnosis of CM. The rising incidence of Cryptococcosis in India is posing a serious threat. Hence early diagnosis may help in the reduction of mortality and morbidity in these patients.

Sensitivity of various diagnostic modalities

