

In Suspected Cases of Meningitis

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INTRODUCTION

In young children with suspected meningitis, lumbar puncture (LP) forms an important component of the diagnostic and therapeutic process. However, pre-request for CT scan can cause undesirable delay in effective treatment.

Do we need a CT scan before doing a lumbar puncture?

OBJECTIVES

to find out if doing CT scan before lumbar puncture affects the clinical decisions in cases of suspected meningitis including the initiation of treatment .

METHODS

We retrospectively reviewed chart of children who admitted with diagnosis of meningitis between the age of 18 months and 14 years over two years period in our tertiary hospital. Neuroradiologist subsequently reviewed all scans.

RESULTS

Total of 116 cases were included, 79 (68.1%) were boys and 37 (31.9%) girls. 55.2% were in the age group 5 – 9 years, 25% were under 5. mean age was 6.3 ± 2.7 year. The majorities (68.1%) were from Middle East and 110 (94.8%) cases had LP done. CSF studies showed that 104 (92.8) cases were aseptic meningitis, 10 were

bacterial and 2 were due to mycoplasma infection.

Only 6 scans showed abnormalities. 2 scans showed diffuse brain oedema; one suggested possible uncal herniation and one showed dilatation of the ventricular system. One scan showed mild brain oedema and one mild ventricular dilatation and in both cases LP was done. No specific symptom or sign could predict the scan result with fever and vomiting occurring in all 6 cases.

On average LP was done 8.9 hours after presentation (CI 7.7 – 10.1).

CT scans were done 7.7 hours after presentation (CI 5.5 – 9.9).

Antibiotics were started 6.3 hours after presentation (CI 5.3 – 7.3).

No serious complication related to LP was reported in any of the

CONCLUSION

CT scan is widely used in cases of children with suspected meningitis to decide on the safety of performing LP. The yield of the scans in these cases is very low. Performing the scans have resulted in significant delays in performing the LP and most importantly on initiating antibiotic therapy, a practice which can have serious consequences on the outcome of these cases.

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