
Infantile subdural empyema: The role of brain sonography and percutaneous subdural tapping in a resource-challenged region.


ABSTRACT

Background This study explored the outcome of children with patent anterior fontanelles who were treated with trans-fontanelle ultrasound scan (TFUSS), which is more affordable and available than CT scan and MRI in the diagnosis of childhood intracranial pathologies and treatment of subdural empyema, in developing countries.

Patients and Methods: Seventeen infants with post-meningitic subdural empyema, diagnosed using trans-fontanelle ultrasound alone and treated with subdural tapping over a 31-months period, were studied. Results: Eleven patients presented with grades II and III Bannister and William grading for level of consciousness in intracranial subdural empyema. Aspirate from 7 (41.2%) patients were sterile. The most common organisms isolated were Streptococcus faecalis 3 (17.6%), Haemophilus Influenza 2 (11.8) and Staphylococcus aureus 2 (11.8), multiple organisms were isolated in three of the patients. Ninety-four percent (94%) of the patients had good outcome. Five subjects developed hydrocephalus, one patient had a recurrence of subdural empyema, four patients had residual hemiparesis, two of the four patients had speech difficulties, while one patient (~6%) died. Conclusion: While CT and MRI remain the gold standard for investigating intracranial lesions, transfontanelle ultrasonography is adequate for diagnosis of infantile subdural empyema in resource-challenged areas. Percutaneous subdural tap is an affordable and effective therapy in such patients with financial challenges.

Key words: Cranial sonography, subdural empyema, subdural taps, transfontanelle ultrasonography