Resource-specific acute meningitis guidelines – a welcome addition

Chronic meningitis, often caused by *Mycobacterium tuberculosis* or *Cryptococcus neoformans*, has received a great deal of attention in South Africa as its incidence has increased along with that of HIV. By comparison acute meningitis caused by a different range of pathogens, has received relatively little attention while continuing to exact a large burden of morbidity and mortality. There are a number of guidelines for acute meningitis from high resource countries but these may be less applicable to resource-limited countries like South Africa, a large proportion of whose population live in deeply rural areas with limited access to healthcare. There are also guidelines for acute meningitis in resource-poor settings but such settings are heterogenous, particularly throughout Africa. South Africa for example lies outside of the traditional meningitis belt where the incidence of meningococcal disease is particularly high. Furthermore, as a middle income, rather than a low income country, resources differ. South Africa is also spared a high incidence of malaria and other tropical diseases which might be mistaken for acute meningitis. It is for these reasons that South Africa requires its own guidelines for the management of acute meningitis, which are presented by a Working Group from the Federation of Infectious Diseases Societies of Southern Africa in this issue of the journal.

One particular difference in these guidelines relates to the neurological contraindications to lumbar puncture (LP) without prior brain imaging. Guidelines for resource-poor settings suggest that LP should be performed on all suspected cases of meningitis ‘regardless of focal signs or a reduced level of consciousness’. Guidelines from high resource settings are much more conservative, recommending brain imaging prior to LP with any focal neurological deficit or mildly reduced level of consciousness. Availability of brain imaging in South Africa is extremely varied which poses a problem for writers of guidelines. In this instance the authors provide an algorithm which differentiates between settings that do or do not have access to brain imaging. They also differentiate neurological from non-neurological contra-indications, which while needing to be corrected prior to LP, do not necessitate brain imaging. When considering the results of CSF examination most meningitis guidelines give tables of CSF results that are compatible with different diagnoses. The working group considered this unhelpful in guiding decision making, given the wide spectrum of CSF results for different aetiologies, particularly in patients with HIV. Instead they provide a flow diagram for decision making based on the availability of results over time with CSF results being considered either normal or abnormal. While this simplifies the process it does not allow room for interpretation of different CSF patterns. One potential problem with this approach may be over-diagnosis and treatment of bacterial meningitis. While there is a validated Bacterial Meningitis Score (BMS) to help differentiate bacterial from viral meningitis in children, no such system exists for adults. It is an urgent research question to find ways of confidently excluding bacterial meningitis in adults and therefore reduce antibiotic pressure and length of hospital stay.

The need for specific guidelines exemplifies the diverse range or populations and availability of services in South Africa. As such these are a welcome addition to the literature which will hopefully guide clinicians at all levels of care on management of a very serious condition on a day to day basis.

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References

5. Jarvis J et al Adult meningitis in a setting of high HIV and TB prevalence: findings from 4961 suspected cases BMC Infectious Diseases 2010, 10:67