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Acute Bacterial Meningitis

I read with interest the recent article on Acute Bacterial Meningitis (ABM)(1). However, the following aspects require further clarification:

1. The authors have mentioned CSF CRP as nonspecific marker of CNS inflammation. However, other workers have opined that CSF CRP is a valuable test for diagnosis of ABM. In an earlier study(2) CSF CRP showed 100% sensitivity and 96-100% specificity for diagnosis of ABM. They also mentioned that negative CSF CRP excludes pyogenic meningitis and concluded that patients with CRP detected in CSF should be considered to be having pyogenic meningitis unless proved otherwise. CSF CRP being a simple, reliable and inexpensive test is recommended as a first step of investigation for rapid differentiation of the type of meningitis. Further, serial determinations of serum CRP has also been employed to monitor the course of ABM(3). Thus CSF CRP and serial serum CRP levels may be routinely recommended for rapid diagnosis and predicting the complications of ABM respectively.
2. The foot note of *Table 11* in their publication states "All drugs should be given intravenously". But Rifampicin (indicated in ABM due to penicillin resistant *S. pneumoniae*) is available only

in oral formulation so it has to be used either by Ryle's tube or orally if the patient is accepting.

3. Regarding use of dexamethasone in meningitis due to Hib, it is to be remembered that timing of the first steroid dose is quite critical. In experimental studies(4) it has been observed that if dexamethasone was given 1 hour after ceftriaxone then inflammation was reduced only moderately 'thereby failing to prevent sequelae. The dose and duration of dexamethasone use in ABM requires further clarification since one author(5) has suggested IV dexamethasone 0.5 mg/kg - first dose prior to antibiotics and subsequently just a dose or two doses more at the intervals of 6-8 hours (maximum of three doses) while they(1) have advised 0.15 mg/kg every 6 hours for 2-4 days.

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Reply

We appreciate the interest in our articles(1) and would like to clarify the queries raised in the letter.

1. **CRP** is mentioned as a nonspecific test as it is a nonspecific marker of inflammation and does not help to detect specific bacterial antigen or diagnose the specific causative agent of bacterial meningitis as in the case of latex agglutination or counterimmunoelectrophoresis(2). A few studies have shown CRP to be a diagnostic test for bacterial meningitis(3,4). However, it is occasionally positive in cases of tuberculous meningitis also(3).
2. Rifampicin can be given orally or intravenously in a dose of 10 mg/kg 12 hourly(5). Absorption and peak drug levels are same by both routes. Since intravenous preparation is not available in India, oral preparations can be used. The incidence of resistant pneumococci and their antibiotic sensitivity in Indian population is not known. Most treatment regimen for meningitis due to resistant pneumococci are empirical. Various combination strategies have been employed to treat meningitis due to resistant pneumococci. Some investigators have recommended addition of rifampicin to vancomycin based on experimental data(5). However, currently a combination of vancomycin and third generation cephalosporin is

recommended. Meropenem is another promising drug for resistant pneumococci.

3. The dose of dexamethasone as mentioned in the article(1) is based on various clinical trials(6,7) and recommendations of Committee of Infectious Disease of American Academy of Pediatrics(8). The recommended dexamethasone regimen is 0.6 mg/kg/day in four divided doses given intravenously for the first two days of antibiotic therapy(8).

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