

Ask the right question

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Evidence based medicine is the conscientious explicit and judicious use of current best evidence in making decision about care of individual patients. By best evidence is meant clinically relevant patient centered clinical research (1). Evidence based medicine is not hard to practice. The argument that evidence based medicine can be practiced only in arm chairs and conference table is frivolous (2).

Burden of Leptospirosis in Sri Lanka has been staggering. In 2008, Sri Lanka recorded an unprecedented incidence of leptospirosis leading to 7406 hospital admissions and 217 deaths with a case death rate of 3%. In 2011, 89 deaths were reported out of 6589 cases with a case fatality ratio (CFR) of 1.35(3).

During last few months we have seen an increasing number of patients with leptospirosis in District General Hospital Matara. Some of them were having multiple organs affected. Acute kidney injury was commonly seen and some required dialysis. Respiratory involvement carried the highest mortality. When we realized that we see an unusually high mortality several questions were raised. Are we using the correct antibiotic? Are we late in introducing antimicrobials? Does high dose steroid help?

When you have questions you should ask “the Oracle” as Neo did in Matrix. Our Oracle is the internet. We thought this is an apt time to do a “systematic review” to get at the answers to those questions. We searched Medscape, Medline and Uptodate 17.3. Our search terms were leptospirosis AND antibiotics AND steroid. We used HINARI to access the relevant articles.

Two small randomized trials have shown that doxycycline and penicillin have reduced the duration of illness by two days and rapid resolution of serum creatinine (4, 5). Two other trials compared penicillin (6 million units daily) to ceftriaxone (1 g every 24 hours), to cefotaxime (1 g every six hours), and to doxycycline (100 mg IV every 12 hours) (6). All regimens were therapeutically equivalent and authors recommended doxycycline or cefotaxime (or ceftriaxone) for the treatment of severely ill patients. Early and late ampicillin therapy rescued tubular defects in severe leptospirosis equally. This provides further rationale to use of antibiotics even in late stage when leptospirosis is complicated by renal and respiratory disease. Evidence is not strong enough to recommend high dose steroids in the management of severe leptospirosis. Most case reports and available small trials suggest that it may have a place in severe respiratory

disease in leptospirosis (alveolar hemorrhage) (7).

In true sense of the word this is not a systematic review eventhough we managed to answer all the questions. Obviously our “systematic review” did not comply with all the rigorous criteria or the statistical analysis that is usually employed. We did not inspect the references, did not contact the authors for relevant complimentary information. However our attempt served the purpose.

As I stated at the beginning evidence based medicine is not difficult to practice and it is not time consuming either. Answers are readily available.

All you have to do is to ask the right question.

References

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