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492. Complicated Urinary Tract Infection : Newer Insight in to Diagnostic Evaluation and Management
SF Haque, D Kumar, S Ahmad, SB Misra, AS Khan
INMC, AMU, Aligarh.

Introduction : Recurrent UTI in women and all symptomatic UTI in men are considered complicated, requiring detailed evaluation for effective management. Role of cross infection by spouses is often missed by the treating physician leading to reinfection, relapse, and inadequate treatment.

Aim : The present study was undertaken on sexually active women and men to delineate the spectrum of microbial infection and significance of semen culture in diagnostic evaluation of UTI in males in general, and spousal cross infection in particular.

Material and Methods : All symptomatic men and women (n=216) having symptoms suggestive of UTI, including asymptomatic sexual partners (spouses) of these patients, enrolled between Jan. 2000 to June 2004 in renal clinic were taken for this prospective study. Mean ages of the patients were males 35.34 ± 8.0 Year (n=112) and females 35.67 ± 8.2 Year (n=104). Freshly voided urine from females and freshly ejaculated semen of males were subjected to aerobic culture and accordingly sensitivity was voided urine from females and freshly ejaculated semen of males were subjected to aerobic culture and accordingly sensitivity was evaluated for UTI in men and male spouses of women having positive urine culture were included in the study.

Result : Female and male patients having positive urine culture and males with positive semen culture were included in the study. Among females break up was E. coli, 70%, Staph aureus 10.75%, Klebsiellasp 9.68% Strep fecalis 3.23%. E. fecal 15% and others were 5.38%. While in males urinary pathogens were E. coli 42.18%, Staph aureus 32.81%, Strep fecalis 6.25%, E fecalis and Klebsiella each 3.12% and others 3.12%. In 82% of male patients semen culture were positive, the pathogenic isolates were E coli (28%), S aureus (18%), Klebsiella (13.33%), E fecalis (12%), Streptococcus fecalis (6.67%), and others 9.33%. Further analysis of result showed that 14 out of 15 (93.3%) asymptomatic male sexual partner were tested positive on semen culture.

Conclusion : While UTI is commonly encountered and easily diagnosed and effectively managed in sexually active women of childbearing age group. The approach to evaluate UTI in men is entirely different as most of the times, urine culture reports are inconclusive because bacterial prostatitis has emerged as the commonest UTI in males which is quite often overlooked by the treating physician. Semen culture is more diagnostic, less traumatic, easily available diagnostic test to be done in each and every isolated UTI in men and male spouses of women having recurrent UTI.

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Due to Pandemicity of HIV/AIDS, Kala-azar/HIV co-infection has emerged as a global problem. Cases of Co-infection of Kala-azar/HIV have so far been reported in 35 countries worldwide.

Till 1994 not a single case of Kala-azar associated with HIV co-infection was reported. 22 cases of HIV/AIDS associated with Kala-azar have been diagnosed in Kala-azar Research Centre, Brahmpura, Muzaffarpur, Bihar. All were males with mean age 34 ± 5. Most of the cases were transport worker or building constructions workers. All had heterosexual exposure in metro cities, North Eastern states or national highways. 100% of cases presented with loss of weight and febrile hepato-splenomegaly. All were resistant to antileishmanial agents, 19 of them died.

In Bihar Kala-azar is going to be the most commonest opportunistic infection in HIV/AIDS patient since 90% of cases of Kala-azar reported in India are from North Bihar.

Yearly incidence of New cases of Kala-azar is estimated to be 20000. The Sympathy of two infections Kala-azar/HIV has important clinical diagnostic therapeutic and epidemiological implication.

The projected incidence of HIV/AIDS in south East Asia including India is going to be one of the highest by the year 2010. Bihar in particular is going to be potentially vulnerable for increasing incidence of Kala-azar/HIV co-infection due to large scale of migratory population.
Conclusion: This small study, highlights the rheumatological mimicry in cases of leprosy.

**514. Diagnosing Meningoencephalitis Due to Scrub Typhus Using Clinical and Laboratory Features**

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Christian Medical College, Vellore.

Background: Scrub typhus, a re-emerging zoonotic disease in India, manifests as a febrile illness with multi-system involvement. Prominent CNS involvement with meningitis or meningoencephalitis is common. As specific laboratory methods remain inadequate or inaccessible in developing countries, prompt diagnosis is difficult. This disease has a mortality of up to 30% and delay in diagnosis is a major contributing factor.

Methods: We compared the clinical and laboratory features of 25 patients, admitted with meningitis to a tertiary care hospital, between October 2002 and December 2003. These patients either had rickettsial meningitis based on abnormal CSF analysis and positive IgM rickettsial ELISA (n=16) or culture proven bacterial meningitis (n=9). Chi-square test was used to compared dichotomous variables and Mann Whitney test was used for continuous variables to predict the features diagnostic of rickettsial meningitis.

Results: The mean age was similar in the rickettsial and bacterial meningitis groups (44.0 ± 18.5 years and 46.3 ± 23.0 years respectively). Features at admission predictive of a diagnosis of scrub typhus meningitis were: duration of fever more than 5 days (8.4 ± 3.5 v/s 3.3 ± 4.2, p=0.0008), CSF pleocytosis of a lesser magnitude (83.2 ± 83.0 v/s 690.2 ± 753.8, p=0.0002), CSF lymphocyte proportion more than 50% (83.9 ± 12.5 v/s 24.8 ± 17.5, p<0.0001) and SGPT elevation more than 60 IU (112.5 ± 80.6 v/s 35 ± 21.4, p=0.023).

Conclusion: This study suggests that clinical features including duration of fever and laboratory parameters like CSF pleocytosis with lymphocyte proportion > 50% and SGPT values are helpful in differentiating rickettsial meningitis from bacterial meningitis.

515. A Comparison of Efficacy and Safety of Azithromycin with Penicillin in Severe Leptospirosis

A Dutta, R Bandyopadhyay, SK Bandyopadhyay, J Ghosal
Nil Ratan Sarkar Medical College and Hospital, Kolkata.

Background: Therapy of leptospirosis can be done by various drugs including beta lactam antibiotics, tetracycline, or macrolides.

Aims: To compare the efficacy of penicillin (PEN) with azithromycin (AZI) in respect to defervescence time (DT), complications and safety of individual drugs.

Results: Table 1: Clinical outcome parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PEN (n=26)</th>
<th>AZI (n=30)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.T.</td>
<td>3 ± 2.4d</td>
<td>3 ± 2.6d</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>Renal failure</td>
<td>12</td>
<td>13</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>Bleeding</td>
<td>2</td>
<td>2</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>ARDS</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Meningeal signs</td>
<td>3</td>
<td>2</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>CCF</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Encephalitis</td>
<td>1</td>
<td>2</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>Dialysis</td>
<td>6</td>
<td>4</td>
<td>&gt; 0.1</td>
</tr>
<tr>
<td>Ventilatory support</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Mortality</td>
<td>2</td>
<td>2</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>Residual renal damage</td>
<td>2</td>
<td>1</td>
<td>&gt; 0.1</td>
</tr>
</tbody>
</table>

Methods: Out of 100 cases of febrile jaundice (without other organ involvement at hospitalization) admitted over a period of one and half years, A total of 56 cases of severe leptospirosis (56%) were studied, 26 received injection PEN (10 lac units 4 hourly, x 14 d) and remaining 30 received AZI (500 mg. IV OD, x 3d). Therapy was commenced within 24 hours of hospitalization. Patients were carefully observed for development of complications including death. Parameters compared are depicted in the Tables 1 and 2.

Conclusion: Efficacy of both drugs was same. Drug allergy was a problem with PEN while patients on AZI developed transient reversible tinnitus. Extent of renal damage, both during acute infection as well as in follow-up period was more in PEN (though statistically not significant). So azithromycin is a short - duration safe alternative to penicillin in severe leptospirosis. (d=days)

Table 2: Side effect of each drugs

<table>
<thead>
<tr>
<th>Side effect</th>
<th>PEN (n=26)</th>
<th>AZI (n=30)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug allergy</td>
<td>2</td>
<td>0</td>
<td>&gt; 0.1</td>
</tr>
<tr>
<td>Thrombophlebitis</td>
<td>2</td>
<td>2</td>
<td>&gt; 0.5</td>
</tr>
<tr>
<td>CNS toxicity</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Reversible tinnitus</td>
<td>0</td>
<td>2</td>
<td>&gt; 0.1</td>
</tr>
</tbody>
</table>

523. Clinical Spectra in a Recent Dengue Epidemic

CR Bhat, RP Jyothi, BM Yashodhara, OR Srirangappa
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Introduction: In the past dengue fever epidemics were common in urban India. Here, we analyse a profile of 176 cases in a recent dengue epidemic in rural Karnataka.

Methods: One hundred and seventy six adult cases of dengue fever, treated in our hospital during June-October 2003 were analysed. All cases were positive for IgM antibodies against dengue 2 on paired serum by MAC-ELISA method.

Result: Out of 176 cases, 104 (59%) were males and 72 (41%) were females, with 101 (58%) cases between 12-30 yrs, 55 (31%) between 31-60 yrs and 20 (11%) > 60 yrs. 96 (64%) cases had fever of < 7 days and 80 (40M + 40F) (45%) had fever of >7 days at presentation. 126 (72%) had severe myalgia, 52 (30%) had erythematous rashes, 46 (26%) had hypotension (SBP < 90 mmhg), 38 (22%) had Purpura, 24 (14%) had bleeding manifestations like epistaxis, malena and bleeding gums. 43 (29%) had TWBC <4000/cmm, 68 (39%) had PCV > 40, 94 (53%) had thrombocytopenia - 14 (8%) had < 20,000/cmm, 46 (26%) - 20,000-50,000/cmm, and 34 (19%) had 50,000-100,000 platelets/cmm. 86 (49%) had elevated AST/ALT and 32 (18%) had elevated S. creatinine. 42 (24%) patients with fever of > 7 days and 18 (10%) with fever of < 7 days had severe thrombocytopenia (PLT < 50000/cmm). 14 (8%) were given blood transfusion, 22 (13%) were given platelet transfusion. Mean duration of illness were 8 days and 14 days for patients presenting < 7 and > 7 days of fever respectively. Mortality was 1.13%.

Entomological study showed vector being Aedes albopictus (not Aedes aegypti).

Conclusion: Dengue epidemic occurs in rural India as well, with fairly uniform clinical features.

Dengue 2, a more virulent strain was causing this epidemic along with emergence of new vector Aedes albopictus.

Monitoring for hypotension, hemoconcentration, thrombocytopenia along with early symptomatic therapy and IV fluids prevents complications; lessen duration of illness, morbidity and mortality.
Diagnostic Usefulness of Bone Marrow Examination in Fever of Unknown Origin (FUO)

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Introduction: Bone marrow examination (BME) including bone marrow cultures (BMC) and PCR are often used as diagnostic procedures for the evaluation of FUO. However, no objective data are available about their utility in FUO.

Methodology: Fifty two patients were included on the basis of revised Petersdorf’s criteria (Durack and Street’s criteria were used for HIV infected patients). All patients underwent routine hematological, biochemical and microbiological investigations. X-ray chest and CT/ultrasonography abdomen. BM aspirate was subjected to pathological examination; bacterial (Bactec radiometric system), fungal and mycobacterial (LJ medium) cultures; smear examination for AFB/LD bodies/malarial parasite and PCR for M tuberculosis. BM trephine was subjected to histopathological examination. The diagnostic yield of BME and the number of patients in whom it was the only diagnostic modality were determined.

Results: A definitive diagnosis could be achieved in 43 (82.7%) patients. Thirty-two patients had infectious etiology with extrapulmonary tuberculosis being most common. The diagnostic yield of BME was 38.6% and it was the only diagnostic modality in 25.6% of patients. The yield of BM aspirate smear examination was 15.4% PCR for M tb was positive in three patients of whom one had tuberculosis while two had an alternative diagnosis. Fungal culture was positive in 1 patient who had HIV infection. Bacterial and mycobacterial cultures were sterile in all patients. A correlation of hematological parameters with BME showed that patients with Hb < 7.7 g% and TLC < 4450/mm³ had a significantly higher yield on bone marrow examination.

Conclusion: BME showed a good diagnostic yield in evaluation of FUO. Of the patients in whom BME was useful, 95% were diagnosed by conventional methods (smear and trephine examination). Bone marrow cultures and PCR for M tb were not useful in classic FUO. However, fungal culture may have a role in the diagnosis of FUO in HIV positive patients.

Profile of Classic PUO in a North Indian Railway Hospital

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Sixty six cases of classic PUO (Duration 43 ± 11 days) were attended at Northern Railway Central Hospital, New Delhi in last 3 years (April 2001 to March 2004). All the cases were selected, as per revised classification of PUO, by Durack and Street (1991). Nosocomial, neutropenic and HIV associated PUO were excluded from study. In addition to the routine tests, advanced tests e.g. CAT scan were required in 21 (31.8%) cases. Bone marrow examination was done in 12 (18%) cases, FNAC/Biopsy were required in 27 (40.9%) cases. Final diagnosis was-

1. Infections: 34 cases (51.5%)
   (a) Tuberculosis: 21 cases (31.8%)
      Pulmonary: 8, Abdominal: 10, Chest: 2, Granulomatous hepatitis: 1.
   (b) Other infections: 13 cases (19.7%)
2. Autoimmune disorders: 18 cases (27.2%)
   Rheumatoid arthritis: 5, SLE: 4, MCTD: 2, Wegener’s Granulomatosis: 2, Sarcoidosis: 2, Adult Still’s Disease: 1, Erythema nodosum: 1.
3. Malignancies: 10 (15.1%). Lymphoma/Leukemia: 7, Solid Tumors: 3
4. Other causes: 1 (1.5%). Hyperthyroidism: 1.
5. Unknown etiology: 3 (4.5%)

Conclusions: Infectious diseases are declining as a cause of PUO in India from 70-80% since 1960 to around 50% today. Tuberculosis still remains the commonest cause in one third of cases. Our findings from North India are consistent with another recent large study of Classic PUO from Mumbai, Western India by Ramamoorthy et al. demonstrating complement C2 deficiency (< 10 U/ml).

* Adjudged Best Papers and got an award of Rs. 1000/- each from Chairman Scientific Committee, Diamond APICON 2005.