Infections

491. Human Brucellosis: A Study on 175 Cases

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SP Medical College, Bikaner.

We studied 175 cases (124 males, 51 females; age 15 years to 60 years) of human brucellosis. The diagnosis was based on clinical profile and significantly high titre (> 1:320) for brucella antigen.

Clinical profile of the cases

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Symptoms</th>
<th>No of patients</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fever</td>
<td>136</td>
<td>77.71</td>
</tr>
<tr>
<td>2.</td>
<td>Joint pain</td>
<td>146</td>
<td>83.43</td>
</tr>
<tr>
<td>3.</td>
<td>Gen. Bodyache</td>
<td>88</td>
<td>50.29</td>
</tr>
<tr>
<td>4.</td>
<td>Headache</td>
<td>59</td>
<td>33.71</td>
</tr>
<tr>
<td>5.</td>
<td>Backache</td>
<td>101</td>
<td>57.71</td>
</tr>
<tr>
<td>6.</td>
<td>Weight loss</td>
<td>33</td>
<td>18.86</td>
</tr>
<tr>
<td>7.</td>
<td>Anorexia</td>
<td>84</td>
<td>48.00</td>
</tr>
<tr>
<td>8.</td>
<td>Radicular pain</td>
<td>33</td>
<td>18.46</td>
</tr>
<tr>
<td>9.</td>
<td>Lymphadenopathy</td>
<td>10</td>
<td>5.71</td>
</tr>
<tr>
<td>10.</td>
<td>Hepatomegaly</td>
<td>51</td>
<td>29.14</td>
</tr>
<tr>
<td>11.</td>
<td>Splenomegaly</td>
<td>62</td>
<td>35.43</td>
</tr>
<tr>
<td>12.</td>
<td>Pain in testis</td>
<td>5</td>
<td>2.86</td>
</tr>
<tr>
<td>13.</td>
<td>Dry cough</td>
<td>18</td>
<td>10.29</td>
</tr>
<tr>
<td>14.</td>
<td>Altered sensorium</td>
<td>6</td>
<td>3.43</td>
</tr>
<tr>
<td>15.</td>
<td>Jaundice</td>
<td>1</td>
<td>0.57</td>
</tr>
<tr>
<td>16.</td>
<td>Ataxia</td>
<td>1</td>
<td>0.57</td>
</tr>
<tr>
<td>17.</td>
<td>Spinal tenderness</td>
<td>82</td>
<td>46.86</td>
</tr>
</tbody>
</table>

All patients were put on standard therapeutic regimen for brucellosis and followed up for 12 weeks. All cases responded well to treatment.

493. A Comparative Study of Intrathecal Vs. Intramuscular Human Tetanus Immunoglobulin

J Chandravanshi, S Trikha, PC Mathur
Gajra Raja Medical College, Gwalior, M.P.

The present study was conducted in 70 patients of a tetanus in the department of Medicine, JA Group of Hospitals, Gwalior.
1. The mortality in Grade-IV, Socio-economic status patients was 13.33% and Grade-V, socio-economic status patients was 16.00% the mortality in the socio-economic classes was found to be highly significant.
2. Most common complaints were lock jaw and dysphagia (92.85% an 78.57%) followed by rigidity, spasm and risus sardonicus (57.14%, 71.42%, and 35.71%) respectively.
3. The difference in mortality in three grades was highly significant in Grade-III included 34.28% of the total cases with highest mortality of 25.00%.
4. In 70 cases studied, 10 died (14.28%). The mortality was 7.5% in Group-A intrathecal TIG, 23.33% in Group-B intramuscular TIG. The difference in mortalities of Group-A and B was significant.
5. Out of 25 cases of Group-A who were given intrathecal TIG before development of spasm and only 02 cases of these died. In Group-B out of 18 cases who were given intramuscular TIG before development of spasm, and of these 03 died.
6. In Grade-III tetanus, out of 14 cases of Group-A 2 cases died (14.28%), and 8 cases of Group-B, 3 cases died (37.5%). The difference in mortality was highly significant.
7. Intrathecal tetanus immunoglobulins was found useful in reducing mortality in Grade-III tetanus.
8. In the present study, aspiration pneumonia of respiratory distress were found as most common complication (20%) autonomic dysfunction was present in 14.28% and sepsis in 8.5% of cases.

It may be concluded that out of two groups studied, intrathecal TIG was found to be most effective than intramuscular TIG.

494. To Study the Comparative Efficacy and Safety of Arteether Injections ($\beta$ Arteether and $\alpha/\beta$ Arteether) for Treatment of Malaria due to Plasmodium Falciparum

P Prajapati, PC Mathur, P Punekar
Gajra Raja Medical College, Gwalior, MP.

The sixty patients (42 males and 18 females) of acute uncomplicated falciparum malaria diagnosed on the basis of parasitologically confirmed smear preparation with asexual parasitemia in the range of 1,000 to 50,000/µl of blood with exclusion criteria’s of patients of complicated malaria, pregnant or lactating women, H/O of taking any antimalarials drug were enrolled. These patients were divided into 2 groups of 30 patients each, Group-A was given Inj. $\beta$ arteether 150 mg IM OD for 3 days. Group B was given Inj. $\alpha/\beta$ arteether 150 mg IM OD for 3 days.

The following conclusions were drawn from abovementioned study: 1) In terms of time taken for fever clearance time (Drug A 26.93 h, Drug B 31.73 hr with p value 0.045), parasite clearance time (Drug A 30.8 h, Drug B 38 hr with p value 0.037), clinical recovery time (Drug-A 50.6 hr, Drug B 60.25 hr with p value 0.0438). The drug $\beta$ arteether (Drug A) showed statistically significant difference with much faster action as compared to $\alpha/\beta$ arteether (Drug B). 2) While no statistically significant difference in terms of adverse drug reaction and in terms of parasitological cure rate.

498. Clinical and Laboratory Profile of Dengue Haemorrhagic Fever in Adults During the 2003 Epidemic in Delhi

OP Kalra, KP Singh, AK Yadav, Priyanka Vinod, S Agarwal, N Kalra
University College of Medical Sciences and GTB Hospital, Delhi.

Clinical manifestations of dengue virus infection vary from asymptomatic to severe life-threatening illness in the form of dengue haemorrhagic fever (DHF) or dengue shock syndrome.
Delhi witnessed an epidemic of DHF during the period September to November 2003. During this period, a total of 944 cases of DHF were admitted in our hospital. Out of these, 250 cases of DHF were admitted in our unit. Age ranged from 12 to 60 (mean 27.0) years. There were 160 male and 90 female patients. All patients had fever at the time of presentation ranging from 4 to 14 (mean 8.0 ± 2.1) days. Bleeding manifestations were present in 152 (60.8%) cases. The sites of bleeding were gums - 50 (20.0%), oral cavity - 39 (15.7%), skin - 37 (14.9%), respiratory tract - 18 (7.2%), gastrointestinal tract - 14 (5.6%) and genitourinary tract - 12 (4.8%). Laboratory investigations revealed Hb ranging from 7.6 to 13 (mean 10.5) g/dl, PCV 24 to 31 (mean 28.0 ± 2.4%). Platelet counts (per mm³) were: < 20,000 in 28 (11.2%), 20,000 to 50,000 in 156 (62.4%), 50,000 to 100,000 in 48 (19.2%) and > 100,000 in 18 (7.2%) cases. Dengue serology was done in 183 cases and was found to be positive in 120 (65.6%) cases. Patients were treated with paracetamol, H2 receptor blockers, antacids, intravenous infusion of crystalloids, colloids, platelet, concentrates and blood as per requirements. A total of 249 patients had jaundice in endemic areas like Jharkhand. There is conjugated hyperbilirubinaemia ranging from 3-6 mg/dl. Rise of enzymes (SGOT: 51-262, SGPT: 51-190 IU/L) were not proportionately very high unlike viral hepatitis. Markers of viral hepatitis were not positive in any of the cases. None of these patients had any features of hepatic encephalopathy. Jaundice disappeared in 5-8 days of initiation of treatment. Twelve patients had deranged renal function (creatinine 1.2 to 2.8 mg/dl). Anaemia (Hb 6.6 to 9.8 gm/dl) was noticed in 12 patients (28.6%). All patients were initially treated with quinine and supportive therapy. Ten patients (23.8%) developed toxicities and jaundice. These patients were treated with artemether. Patients became smear negative in two to six days. There was no mortality.

Conclusion: Falciparum malaria is a common cause of jaundice in endemic areas like Jharkhand. There is conjugated hyperbilirubinaemia with 2-3 fold rise in enzymes. These features differentiate “malarial jaundice” from viral hepatitis, where there is many fold rise of liver enzymes.

501. Liver Dysfunction in Falciparum Malaria

D Bhattacharyya, SP Rai, M Kashyap, SK Kaul, RK Tripathi
Military Hospital Namkum, Ranchi - 834 010.

Object of the study: To clinically study liver function derangements in falciparum malaria (FM).

Methodology: Patients who presented to a zonal service hospital with jaundice between May 2002 and May 2004 were studied. Detailed physical examination, complete blood counts, liver and renal function tests and ECG were carried out in all cases.

Summary of Results: One hundred and forty patients were found to be slide positive for FM. 42 (30.0%) had deranged liver function. Twenty nine patients were males and 13 patients were females. Age of patients were 13-68 years (mean 31.3 years). Fever (2-7 days duration), chills, headache and vomiting were the common symptoms. Past history of malaria was present in 17 (42%). Liver (1-3 cm) and spleen (1-3 cm) were palpable in 68 and 79% cases respectively. 9.5% patients and features of cerebral malaria. All patients had conjugated hyperbilirubinaemia ranging from 3-6 mg/dl. Rise of enzymes (SGOT: 51-262, SGPT: 51-190 IU/L) were not proportionately very high unlike viral hepatitis. Markers of viral hepatitis were not positive in any of the cases. None of these patients had any features of hepatic encephalopathy. Jaundice disappeared in 5-8 days of initiation of treatment. Twelve patients had deranged renal function (creatinine 1.2 to 2.8 mg/dl). Anaemia (Hb 6.6 to 9.8 gm/dl) was noticed in 12 patients (28.6%). All patients were initially treated with quinine and supportive therapy. Ten patients (23.8%) developed toxicities and jaundice. These patients were treated with artemether. Patients became smear negative in two to six days. There was no mortality.

Conclusion: Falciparum malaria is a common cause of jaundice in endemic areas like Jharkhand. There is conjugated hyperbilirubinaemia with 2-3 fold rise in enzymes. These features differentiate “malarial jaundice” from viral hepatitis, where there is many fold rise of liver enzymes.

503. Escalating Resistance to Nalidixic Acid - Is Chloramphenicol the Answer? Study of 165 Cases of Culture Positive Typhoid Fever

MK Bang, JS Sorabjee, K Ramamoorthy
Bombay Hospital, Mumbai.

Today, typhoid fever is rare in industrialized countries, although it remains a serious and common health threat in the developing World, so is in India. In recent years multiresistant strains of Salmonella typhi have emerged in most parts of India causing severe therapeutic problems. Though it’s common problem, Indian data regarding this issue is not very robust.

Aim: To evaluate the pattern of drug sensitivity in the isolates of Salmonella typhi and paratyphi in a urban population of India.

Material and Methods: Prospectively, during 2000-2003, all culture positive isolates in typhoid fever admitted to Bombay Hospitals were studied. For blood culture BACTEC system was used. By Kirby-Bauer disc diffusion method sensitivity for 22 different drugs was tested. We could evaluate 165 cultures.

Results: The % of sensitivity for drugs was as in the Table.
Multidrug resistance is a significant concern in the treatment of malaria. The table below shows the sensitivity of various antibiotics against Plasmodium falciparum:

<table>
<thead>
<tr>
<th>Antibiotic</th>
<th>% of sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ampicillin</td>
<td>3.89</td>
</tr>
<tr>
<td>Amikacin</td>
<td>100</td>
</tr>
<tr>
<td>Chloramphenicol</td>
<td>77.57</td>
</tr>
<tr>
<td>Cefotaxime</td>
<td>100</td>
</tr>
<tr>
<td>Cefuroxime</td>
<td>100</td>
</tr>
<tr>
<td>Cefazidime</td>
<td>98.78</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>99.39</td>
</tr>
<tr>
<td>Cefaclor</td>
<td>100</td>
</tr>
<tr>
<td>Amox+cla.acid</td>
<td>99.39</td>
</tr>
<tr>
<td>Amoxicillin</td>
<td>55.84</td>
</tr>
<tr>
<td>Norfloxacin</td>
<td>99.39</td>
</tr>
<tr>
<td>Nalidix acid</td>
<td>19.62</td>
</tr>
<tr>
<td>Ofloxacin</td>
<td>99.39</td>
</tr>
<tr>
<td>Amp+sulbactum</td>
<td>97.40</td>
</tr>
<tr>
<td>Septran</td>
<td>3.63</td>
</tr>
<tr>
<td>Doxy</td>
<td>2.53</td>
</tr>
<tr>
<td>Gentamicin</td>
<td>100</td>
</tr>
<tr>
<td>Netilmicin</td>
<td>100</td>
</tr>
<tr>
<td>Piperacillin</td>
<td>98.55</td>
</tr>
<tr>
<td>Rifampicin</td>
<td>9.09</td>
</tr>
<tr>
<td>Tetracycllin</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Conclusion: The incidence of MDR strains (resistance to septran + ampicillin + chloromycetin) was 21.21%. Nalidixic acid resistance (NAR) was 80%. Recent literature equates NAR to lower efficacy of all quinolones, though not exactly to quinolone resistance. So it’s very alarming fact. Amoxicillin, tetracycline, doxycycline and septran have resistance >95% - these should not be considered in empirical treatment of enteric fever. The sensitivity % of chloramphenicol is significantly better compared to the data of a decade ago (~50% a decade ago and 77% now!). The reason for this is not clear, but no usage for long period is a proposed mechanism.

505. Acute Renal Failure in Malaria

VK Kulkarni, V Jayakar, KS Mehta, NE Borges
TN Medical College and BYL Nair Ch Hospital, Mumbai.

Aims: 1. To determine the incidence, types, mortality and prognostic markers of acute renal failure in smear positive malaria cases. 2. To correlate the incidence of complications with the parasitic index and mortality with various therapeutic options.

Methodology: Patients with peripheral smear positive for either P. Falciparum or vivax or both and acute renal failure (serum creatinine > 3 mg/dl or blood urea nitrogen > 30 mg/dl) were included in the study. Their clinical and biochemical profiles were studied. Parasite index was determined. Kidney biopsy was done when indicated. Patients with compelling indications received dialysis. Complications were managed in the intensive care unit.

Results: The incidence of acute renal failure was 2.63%. Falciparum malaria is diagnosed in 75% cases, which were predominantly oliguric (58.33%), had higher, incidence of complications (56.4%) and mortality rates (45.83%) and were more dialysis dependent (79.10%). Male to female ratio was 1.78:1. Patients above 40 years had worse prognosis when associated with anaemia, sepsis and adult respiratory distress syndrome and higher mortality.

Conclusions: Prognostic factors in acute renal failure in descending order of importance included parasitic index > 15%, high creatinine (> 8 mg/dl), adult respiratory distress syndrome, falciparum infection, Disseminated intravascular coagulation, oliguria, sepsis, anaemia, hyperbilirubinemia (Total Bilirubin 5 mg%), SGPT (> 150 IU), age (> 40 years), female sex and hypoglycemia.

506. Management of Dengue Haemorrhagic Fever and Dengue Shock Syndrome - An ICU Experience

AS Karpe, T Trivedi, N Padwal, YE Yeolekar
LTM Medical College and General Hospital, Mumbai.

Introduction: Dengue haemorrhagic fever is defined as an acute febrile illness caused by 4 serotypes of dengue virus and characterised clinically by a haemorrhagic diathesis and tendency to develop a shock syndrome.

Background: Dengue fever is acute febrile illness with constitutional symptoms, haemorrhagic diathesis. Some of patients need ICU management.

Aim: 1. To study clinical profile of ill patients of DHF/DSS. 2. To analyse the treatment received and its impact on prognosis.

Methods: All the patients of probable dengue fever (by clinical criteria and IgM antibodies) who presented with DHF (stage 3/4) or DSS were included for study (January 2002 - December 2003).

Their clinical profile, biochemical investigation haematological and radiological features were studied and results analysed using chi-square test.

Results: Out of 66 patients M 41, F 25 age 12-59 years (Mean 39.6). Forty two had DHF and 24 had DSS. Presenting features were fever (62%), headache (49%), myalgia and arthralgia (43%), leucopenia (31%), rhabdomyolysis (26%), haemorrhagic manifestation (24%), rash (17%).

Hb varying from 8-19.2% (M-14.8), haematocrit 55-72 (M - 60.3), platelets 4000 to 1.2 lack per cmm (M - 37,000) and creatinine 0.9 to 5.2 (M - 2.1).

Patients received treatment with - Crystallloid/colloid 2.3-9.6 lits/min (M - 4.7 lits/day) FFP 4-16 units (M-6) Platelets required in 37 patients 6-38 units (M-10). Appropriate antibiotics required in 47 patients. Total mortality 21/66 (31.82%) DHF 12/42 (28.57%), DSS 10/24 (41.67%). Mortality was maximum in patients with DSS with acute renal failure - 9/17 (52.9%).

Conclusion: DF is common tropical infection requiring ICU care in patients presenting with DHF/DSS. With prompt diagnosis and institution of early supporting therapy comprising of crystallloid/colloid, FFP; platelet transfusion many lives can be salvaged.

508. Prognostic Significance of CRP in Malaria in Pregnancy

NS Sahoo, B Soren, P Pradhan, PC Karua, M Murmu, PK Barla, MK Mohapatra
VSS Medical College, Burla, Orissa - 768 017.

Introduction: The present study has been conducted to identify the prognostic significance of acute phase reactants in cases of pregnancy with Malaria with special reference to CRP.

Material and Methods: In 50 cases of Malaria (both Vivax and Falciparum) with pregnancy, diagnosed by peripheral smear/MP (QBC)/MP (ICT)/Parasight-F, Parasite counts and acute phase reactants (like ESR, TPC, CRP) were measured. Twenty patients of non-pregnant Malaria were taken as controls and cases were followed up.

Results: Out of 50 cases, 35 (70%) had falciparum, 11 (22%) Vivax and 4 (8%) had mixed malaria. Common manifestation were fever (100%), cerebral Malaria (60%), convulsion (32%), hypoglycemia (6.6%), Oliguria (32%), Jaundice (32%), Anaemia (44%). Parasite count in primigravidae (≥ 500,000/μl) and multigravidae (≥ 2,000,000/μl) found to be higher as compared to non-Pregnant cases (≥ 200,000). The manifestations and complications were more in Primigravidae as compared to multigravidae. The mortality in pregnancy with malaria was 44% in comparison to malaria with non-pregnant cases (15%). The
mean CRP values in pregnancy with malaria was 11.5 mg/l as compared to 4.2 mg/dl in malaria with non-pregnant cases. Twenty two cases who expired during treatment had mean CRP value of 13.7 mg/l.

Conclusion : Elevated CRP values and heavy parasitemia are associated with more complications and mortality in pregnancy malaria.

510. Study of Clinical Profile of Malaria at KMC Hospital, Attavar

KN Chowta, MV Prabhu, R Sharma
Kasturba Medical College, Mangalore, Karnataka - 575 001.

Objective : To study the clinical features, complications and response to treatment in patients with malaria.

Methods : This is a prospective study of malaria done at KMC Hospital, Mangalore. Study was conducted during the period of July 2002 to January 2003.

Results : Out of the 54 patients, 39 (72.22%) were males and 15 (27.77%) were females with age group ranging from 17 to 65 years. Duration fever was around 2-7 days. Fever was present in all the patients. 51.55% of patients had headache. 31.55% had nausea and vomiting. Jaundice was seen in 18.52% of patients. Two patients had diarrhea and two patients had gastritis. Four patients complained of cough. Previous history of malaria was present in nine patients. 31.48% of patients had infection with P. falciparum, 33.33% with P. vivax infection and 29.62% had mixed infection. Complications were seen in nine patients. One patient had cerebral malaria and five patients had derangement of liver function. One patient had pancreatitis and one more patient had renal impairment. Out of the 54 patients, three patients received empirical treatment without smear being positive. Four patients had chloroquine resistant malaria that later responded to artemether and quinine. Apart from chloroquine, quinine was given in five patients, artemether was given in 12 patients, pyrimethamine/sulfadoxine was given in 17 patients and 16 patients received doxycycline also. Smear became negative after 3-5 days of treatment. All patients responded to treatment.

Conclusion : Liver derangement with jaundice was more common in falciparum and mixed infection. Commonest age group affected in the present study was 19 to 23 years. Chloroquine resistance was seen in 7.4% of patients.

512. The 2003 Outbreak of Dengue Fever in Delhi

NP Singh, R Jhamb, SK Agarwal, MK Daga, M Gaia, S Kumar
Maulana Azad Medical College, New Delhi.

Background and Purpose : Dengue fever (DF) and dengue hemorrhagic fever (DHF) are widespread in Southeast. DF spreads its hoolm every now and then and grips people in its claws despite measures being taken to curb its emergence and spread. An outbreak of DF in 2003 started during September reached its peak in October - November and lasted till every December. This study describes the clinical and laboratory date of the cases of DF and DHF admitted in Lok Nayak Hospital, New Delhi.

Aim : To analyse the clinical and laboratory data of the patients, suspected of having dengue fever admitted in Lok Nayak Hospital, New Delhi in 2003.

Material and Methods : The present study was conducted on approximately 300 patients admitted as suspected cases of DF in LNH, New Delhi and 200 were confirmed by serological study for the diagnosis of dengue virus infection. Test for both IgM and IgG antibodies were done by ELISA technique. The patients who tested positive were analysed by other hematological and biochemical investigations.

Results : The mean age of 200 patients of DF confirmed by serological tests was 26 ± 10 years. Fever was present in 98% of the cases with average duration of fever being 4.5 ± 1.2 days with headache (62%), backache (58%), vomiting (51%) and abdominal pain (21%) being the other presenting complaints. Hemorrhagic manifestation in the form of positive tourniquet test (21%), gum bleeds and epistaxis (40%), hematemesis (22%), skin rash (20%) and malena (14%), were also observed in quite a few patients. Hepatomegaly and splenomegaly was observed in 10% and 5% of the cases respectively. Laboratory investigation revealed thrombocytopenia (with platelet count < 1 lakh/µl) in about 61.39% of cases and leucopenia (TLC < 3000/mm³) and hemocromatosis (Hct > 20%) of expected for age and sex) was found in 68% and 52% of the cases respectively. The mortality rate was 4%, the majority of others recovered with supportive treatment. DHF was observed in about 50% of the cases and multiple bleeding manifestation and severe thrombocytopenia was associated with higher mortality. The average duration of stay in hospital was 8 ± 2 days.

Conclusion : Thus despite the wide spread measures taken to control the outbreaks of Dengue it causes major epidemic and more stringent measures in the form of vector control, improved sanitation and health education is needed to decrease morbidity, mortality and health care cost caused by a preventable disease.

518. Mycosis - An Emerging Threat

Vishwanath Biradar, Rekha Pradeep
St. John’s Medical College Hospital, Bangalore.

Introduction : Fungal infections are increasing in prevalence with advances in medical therapy. In developing countries, especially in India, fungal infection are a major problem in view of increasing HIV infection, inappropriate use of antibiotics, immunosuppressive drugs and unhygienic hospital wards and ICUs.

Aim : To study the spectrum of fungal infections and risk factors associated with them. To study the outcome of these fungal infections.

Material and Methods : A total of 148 patients with culture or biopsy proven fungal infections were included in the study. There risk factors were identified the treatment of all cases was studied and outcome evaluated. It is a prospective study approved by institutional ethical board.

Results : Mean age was 46.39 years with (SD 16.89 years). Male were 97 and female 51. Spectrum : Candidiasis was the most common fungal infection documented in 95 patients (64.2%). Cryptococcal infection was seen in 27 patients (18.2%), mucormycosis in 20 patients (13.5%) and aspergillosis in 6 (4.1%) patients. Risk factors : Forty-one had no identifiable risk factor. Diabetes mellitus was the commonest risk factor present in 59 cases, followed by HIV in 34 patients. Renal failure was found in 23 patients, steroid therapy in 18 patients and 3 patients had broad-spectrum antibiotic usage. Outcome of fungal infection is shown in Table below:

<table>
<thead>
<tr>
<th>Fungi</th>
<th>Improved</th>
<th>DAMA*</th>
<th>No change</th>
<th>Dead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crypto</td>
<td>14</td>
<td>3</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Candida</td>
<td>75</td>
<td>0</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Mucor</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Asperg</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

*Discharged against medical advice.

Conclusion : Fungal infections are a pervasive menace in the spectrum of infections seen in a tertiary care hospital, Candida is the commonest fungal infection in our study and Diabetes Mellitus remains the commonest risk factor. Cryptococcal meningitis has emerged with HIV pandemic. Mucormycosis continues to flourish among Diabetics with high mortality (45%).
Leptospirosis

P Gohel, A Bhattacharya, D Ghia, Rajesh
Government Medical College, Surat - 395 001, Gujarat.

Leptospirosis is a zoonosis with protean manifestations caused by the spirochete, Leptospira interrogans, having 23 sero groups and more than 200 serovars. Synonyms for the disease include Weil’s disease, swineherd’s disease, rice-field fever, cane-cutter fever, swamp fever, mud fever, hemorrhagic jaundice, Stuttgart disease and Canicola fever. In South Gujarat, it is important public health problem.

Material and Methods: We have studied 50 cases of Leptospirosis within a period of three months. Male:Female :: 40:10. Age : range: 17-63 years. The clinical manifestations: fever - 100%, headache: 24%, musculoskeletal pain: 44%, jaundice: 100%, cough: 18%, conjunctival suffusion: 44%, oliguria: 88%, meningeval sign: 8%. Muscle tenderness: 44%, splenomegaly - 10%, pharyngitis - 12%, hepatomegaly - 20%, abnormal chest auscultation - 18% or skin rash - 4%. On clinical suspicion, the cases were investigated and found to be positive for leptospiral antibodies and were confirmed after two weeks.

Outcome: Except two all patients recovered, 22 patients required hemodialysis, and due course of time recovered. After one month: serum bilirubin and SGPT came to baseline.

Treatment: Penicillins (6 million units/d), tetracyclines, chloramphenicol, doxycycline (100 mg PO BID) and erythromycin have anti leptospiral activity. We preferred Penicillin.

Prevention - Vaccination of domestic animals against leptospirosis provides substantial protection, but is not effective in 100 percent of animals. No vaccine is available for human immunization so far. Doxycycline prophylaxis (200 mg PO every week for 2-3 weeks and at the end of exposure) was effective in preventing cases of leptospirosis compared to placebo.

The major control measure available for humans is to avoid potential sources of infection such as stagnant water, water derived from run off from animals farms, rodent control, and protection of food from animal contamination. No vaccine is available for human immunization in the United States.

Role of Blood Transfusion in Pregnant Women with Severe Falciparum Malaria

S Tripathy, SR Pattnaik, PK Padhi, GC Behera
VSS Medical College, Burla, Sambalpur, Orissa.

Aims and Objectives: The present study has been undertaken to observe the significance of blood transfusion (BT) in pregnant women with severe falciparum malaria.

Material and Methods: Thirty cases of severe falciparum malaria (22 primi, 8 multigravida) having clinical features of coma, convulsion, jaundice and ARF, diagnosed by MP QBC, MP/ICT, Parasight F were subjected to study. Patients having haemoglobin <7.0 gm% and ARDS were excluded. BT was given with 24 hours of hospitalisation in 20 patients. All cases received IV quinine and other necessary measures.

Results: Mortality was high in primi (54.5%) and low in multi (37.5%). Out of 30 cases 28 (93%) had coma, 20 (66%) had coma, 20 (66%) had convulsion, 18 (60%) had jaundice and 21 (70%) had ARF. Mortality rate was 45% in patients who received BT and 80% who did not received BT.

Conclusion: The mortality rate is significantly low in patients who received BT even if the patients were not severely anaemic. About all this is a simple means to save life in the institutions where exchange transfusion facility is not available.

A Simple Method for Air-Exchange Measurement in Hospitals

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Introduction: Air quality is an important determinant of health in the hospital environment. Traditionally air-exchanges have been measured by use of tracer gases and sophisticated equipments. We developed a simple, cost-effective, easily available and reproducible methodology for the measurement of air-exchanges in hospital setting.

Methodology: We applied the principle of the gas dilution method, using ordinary CO2 gas, easily available in most hospitals. For measuring gas concentration we used a capnograph available in most ICU’s. CO2 was released into a closed room with the fan switched on to ensure uniform mixing. A bedside capnograph was used to measure the partial pressure of the gas. When the gas concentration achieved was 22-24 mm Hg, the pre-existing ventilatory ports were opened and time against concentration recorded till a reading of 12-14 mm. Air-exchange was calculated using the formula: A=1/t log (C/C0) where, A is number of air-exchanges per hour, C0 is initial gas concentration, C is gas concentration at time t.

Results: We conducted the study in the operating room and OPD where the rates of air-exchange were 9-11/hour and 2-3/hour respectively. Results were reproducible on repeat measurement.

Conclusion: In our country, there is lack of proper surveillance of air-quality, because of unavailability of necessary equipments and funds. We attempted to design a simple, reproducible and operationally feasible model to measure air-exchange in a hospital setting. The limitations of this approach were the difficulty in attaining uniform concentration, as CO2 is a heavy gas and inability to account for sources of air leak. Nonetheless, the described method can provide a fairly useful estimate of air-quality in hospitals.

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