Sir,

We read the article of Dr. Wasnik, Dr. Manohar et al regarding ‘Clinical profile of falciparum malaria’ (JAPI, October 2010; 60:33-36), with great interest. In their study of 80 patients 37 had severe malaria and 43 had uncomplicated malaria¹.

We hereby submit a study report of 50 cases of severe P. Falciparum Malaria, admitted in medicine ward at government medical college, Aurangabad, from a period of November 2009 to November 2011.

Malaria was diagnosed on the basis of peripheral smear and rapid Malarial test. Cases satisfying WHO criteria of severe Malaria (i.e. Cerebral Malaria / coma, Acidosis, severe Anaemia, Renal failure, Pulmonary oedema/ ARDS, hypoglycaemia, hypotension / shock, bleeding / DIC, Convulsions, haemoglobinuria, impaired consciousness, hyperparasitaemia, Jaundice) were included in the study.

In this Hospital based cross sectional study, out of 50 patients 39 (78%) patients recovered completely, 11(22%) patients died. Mean age of patients was 39.92 years, male:female ratio was 1.08:1. Mean BMI was 22.26. Most common manifestation in our study was jaundice (78%) followed by bleeding tendencies (60%). Platelet count < 50,000 /µl was found in 30(60%) patients. Prothrombin time > 18 sec was found in 8(16%) patients. 26(52%) patients received inj Artesunate in combination with Sulphadoxine-pyrimethamine/ doxycycline and 24(48%) patients received inj Quinine. Platelet transfusion was required in 30(60%) patients and 8(16%) patients needed FFP to control bleeding. 16(32%) patients had multi-organ dysfunction, (most common organs being liver and kidney) and required ICU care. 6(12%) patients required ventilator support. 5(10%) patients underwent dialysis for acute renal failure.

The Table 1 shows outcome of various manifestation of severe P. Falciparum Malaria in study group.

Patients having co-morbidity with diabetes had poor prognosis, 3 (23%) out of 13 died. Co-infection with p. vivax was found in 12 patients out of which 4 (33%) died and 8 (66%) recovered. Dengue was found in 2 and both died. Among biochemical parameters, serum creatinine > 3 mg/dl, elevation of AST/ALT > 3 times of normal limits & prolongation of PT > 18 seconds on admission were found to be statistically significant poor prognostic factors. Mean duration of starting treatment after onset of

**Table 1 : Outcome of various manifestation of severe P. Falciparum Malaria in study group**

<table>
<thead>
<tr>
<th>Manifestation</th>
<th>Died</th>
<th>Recovered</th>
<th>Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jaundice</td>
<td>11 (28%)</td>
<td>28 (70%)</td>
<td>39</td>
</tr>
<tr>
<td>Bleeding</td>
<td>07 (23%)</td>
<td>23 (76%)</td>
<td>30</td>
</tr>
<tr>
<td>Renal Failure</td>
<td>06 (23%)</td>
<td>20 (76%)</td>
<td>26</td>
</tr>
<tr>
<td>Acidosis</td>
<td>05 (29%)</td>
<td>12 (69%)</td>
<td>17</td>
</tr>
<tr>
<td>Severe Anemia</td>
<td>05 (35%)</td>
<td>09 (64%)</td>
<td>14</td>
</tr>
<tr>
<td>Cerebral Malaria</td>
<td>04 (30%)</td>
<td>09 (68%)</td>
<td>13</td>
</tr>
<tr>
<td>Pulmonary edema</td>
<td>03 (50%)</td>
<td>03 (49%)</td>
<td>06</td>
</tr>
<tr>
<td>Hypoglycemia</td>
<td>01 (33%)</td>
<td>02 (66%)</td>
<td>03</td>
</tr>
<tr>
<td>Hypotension/ Shock</td>
<td>01 (100%)</td>
<td>00 (0%)</td>
<td>01</td>
</tr>
</tbody>
</table>
Dengue Masquerading as Upper Respiratory Tract Infection: A Report of Two Cases

KV Vinod¹, TK Dutta²

Sir,

Upper respiratory tract manifestations have received less attention in patients of dengue fever. Here we present two patients [one with dengue haemorrhagic fever and the other with dengue fever (laboratory confirmed in both cases)] who had persistent, predominant upper respiratory tract manifestations, mimicking upper respiratory tract infection.

Patient 1: A 19 year old male presented with complaints of sore throat, high grade fever [103-104°F], headache, generalised body aches and weakness for 2 days. There was no history of rhinorrhoea, cough and bleeding. He had conjunctival congestion and generalised blanchable erythematous rash. Patient was haemodynamically stable. Systemic examination was unremarkable. Patient continued to have high grade fever [103-105°F] and developed severe throat pain and odynophagia on day 3 of illness which forced him to take only liquid diet. Oral cavity showed congestion of the posterior pharyngeal wall, soft palate and palatine tonsils. Few petechial spots on the soft palate and an ulcer [0.5 cm × 0.5 cm] over the anterior pillar of right tonsillar fossa were also seen. Laboratory evaluation [on day 4] showed haemoglobin:18.2 g/dl, haematocrit: 55.5%, leucocytes: 4000/µl [differential:N-55%, L-40%, M-5%],

1. Age, sex, and body mass index did not affect the prognosis, but co-morbidity of diabetes was found to be a poor prognostic factor.
2. Co-infection with vivax malaria and dengue was found to be poor prognostic factor.
3. Short duration between onset of symptoms and treatment was a good prognostic factor. Patients receiving Artesunate had better prognosis.
4. Parasitic index > 20%, parasite density > 500000, and pigmented PMNs were associated with very high mortality rates.

References
1. Preetam N Wasnik, TP Manohar, NR Humaney, HR Salkar. Study of Clinical Profile of Falciparum Malaria in a Tertiary Referral Centre in Central India. JAPI 2012;60;33-36.
platelet count: 27,000/µl [lowest count], normal liver, renal function and serum electrolytes. Patient’s haemoglobin and haematoctit fell down to 15.2 g/dl and 43.6% respectively after intravenous hydration [on day 5]. Tourniquet test was positive. Chest radiograph and abdominal sonography were normal. Throat swab Gram stain and culture did not reveal clinically significant pathogenic bacteria. Blood culture was sterile. Patient received oral azithromycin [500 mg/day, for 3 days] empirically for troublesome throat complaints along with local application of lignocaine 5% gel over the ulcer and warm saline gargles for pain relief. Throat swab tested for swine flu by PCR was negative. Dengue NS-1 antigen capture assay [by ELISA] and IgM antibody ELISA were positive. Patient’s fever gradually subsided by day 7 and thrombocytopenia, sore throat and odynophagia by 8 days.

Patient 2: A 42 year old male, diabetic and hypertensive for 3 years, presented with complaints of sore throat, cough with mucoid expectoration, hoarseness of voice, high grade fever, body aches, headache and redness of the eyes for 3 days. There were no complaints of rhinorrhea, vomiting, diarrhoea, abdominal pain and bleeding. On admission he had fever [103 °F], conjunctival congestion, generalised blanchable erythematous rash. Oral cavity examination showed congestion of posterior pharyngeal wall, soft palate and palatine tonsils. Systemic examination was normal. Laboratory evaluation [on day 5 of illness] revealed Hb:13.2 g/dl, haematocrit:39.2%, TLC: 4800/µl [differential: N-58%, L-38%, M-3%, E-1%], platelets: 16,000/µl [lowest count]. Renal function and serum electrolytes were normal. Liver function tests revealed mild transaminitis [AST: 120 U/l, ALT: 88 U/l]. Tourniquet test was negative. Throat swab Gram stain and culture did not reveal pathogenic bacteria. Blood culture was sterile. Chest radiograph and abdominal sonography were normal. Patient continued to have severe sore throat, cough with mucoid expectoration and fever [between 101-103°F]. He was empirically given a course of oral azithromycin [500 mg/day for 3 days]. Throat swab tested for swine flu by PCR was negative. Dengue NS-1 antigen capture assay [by ELISA] and IgM antibody ELISA [done on day 6] were positive. His fever, throat complaints and thrombocytopenia gradually improved by day 9.

Discussion

Both of our patients had predominant manifestations of severe acute pharyngitis, persisting throughout the course of the illness. Both had other typical manifestations of dengue fever [DF] like high grade fever, body aches, generalised blanchable erythematous rash and headache along with thrombocytopenia. Patient 1 fulfilled the diagnostic criteria [haemoconcentration with raised haematoctit, thrombocytopenia, positive tourniquet test and mucosal bleeding (petechiae)] for dengue haemorrhagic fever.

Although transient upper respiratory tract [URT] manifestations like sore throat, rhinorrhoea, cough and pharyngeal congestion have been described during initial part of febrile phase in DF epidemics, prominent URT manifestations persisting throughout the course of illness and dominating the clinical picture [as seen in our patients] are thought to be uncommon. These manifestations during the febrile phase of DF, especially when DF occurs sporadically [as in our patients] can cause diagnostic confusion with upper respiratory tract infections and influenza. The consequences of dismissing DF as upper respiratory tract infection can be serious as patients are denied monitoring [clinical and laboratory] and adequate supportive management. The presence of diffuse erythematous rash and thrombocytopenia in our patients alerted us to the possibility of DF.

In a study of 207 patients of dengue reported from Malaysia, 50% of children and 44% of adults who were ambulatory, 34% of children and 24% of adults who were hospitalised had symptoms of rhinorrhoea and/or sore throat. Coinfection with dengue virus and H1N1 pandemic influenza A [swine flu] virus has been recently reported. Swine flu was ruled out [by throat swab polymerase chain reaction testing for H1N1] in our patients as the cause of prominent upper respiratory tract symptoms.

To conclude DF can rarely present with predominant upper respiratory tract symptoms which may cause diagnostic confusion with upper respiratory tract infections and influenza.

References