Case no. 1:
A 58 years old male patient presented with breathlessness and fever for 4 days with blood pressure of 130/60mmHg, heart rate of 88 beats/minute, respiratory rate of 26 breaths/minute and temperature of 99.6°F. Empirically injection ceftriaxone was started along with 500 ml Normal Saline.

Case no. 2:
A 70 years old female patient presented with signs of sepsis in the emergency with high grade fever (102 F), blood pressure of 110/60 mm of Hg, pulse rate of 110/min, CRP was positive (60µg/L). Empirically injection ceftriaxone was started along with 500 ml Normal Saline.

Case no. 3:
A 50 years old male patient presented with cough and fever for 1 week with blood pressure of 110/90mmHg, heart rate of 100 beats/minute, respiratory rate of 20 breaths/minute and temperature of 100 F. Empirically injection ceftriaxone was started along with 500 ml normal saline.

Case no. 4:
A 58 years old male patient presented with breathlessness and fever for 4 days with blood pressure of 130/60mmHg, heart rate of 88 beats/minute, respiratory rate of 26 breaths/minute, and temperature of 99.6°F. Empirically intravenous Gentamicin was started along with 500 normal saline.

All the patients had biological signs of sepsis (reduced platelet count and elevated C-reactive protein, raised WBC count).

Blood culture of these patients was carried out in the Clinical Microbiology laboratory as a part of routine diagnostic protocol. Blood culture was performed in automated instrument, BACT/ ALERT 3D (Biomerieux).

Blood culture positivity was detected within 24 hours of incubation in all the samples. Subculture was done by conventional method on Sheep Blood agar, Chocolate agar and MacConkey’s agar; incubated aerobically at 37°C. The clinician was alerted immediately. After 24 hours typical large, circular, low convex, moist β haemolytic colonies were observed on Blood agar (BA) & non-lactose fermenting pigment colonies on MacConkey’s agar (MAC).

Gram stain was performed on culture smear, which revealed Gram negative bacilli. The isolates were oxidase and catalase positive and motile. Identification and antimicrobial susceptibility of all the isolates was done by Vitek 2 Compact system (Biomerieux) using card GN23141 and AST281 respectively. They were identified as Burkholderia cepacia complex with similar multi drug resistant pattern. [Table/Figure-1]
Contaminated intravenous fluids are a rare source of bacteremia, but also the role of automation in early identification of the pathogen. Infection control strategies which effectively controlled the outbreak included disinfectants, antiseptics, topical anesthetics, respiratory agents are limited.

Other reported sources within hospitals described in the literature include disinfectants, antiseptics, topical anesthetics, respiratory therapy equipment, mouthwash, and lotions [14].

Our cases highlight the importance of prompt implementation of effective antimicrobial therapy can decrease morbidity and mortality.

**REFERENCES**


**DISCUSSION**

Burkholderia cepacia is an aerobic Gram-negative rod that causes healthcare associated infections through contaminated disinfectants, fluids and medical equipment. This bacterium shows resistance to various antibiotics. For this reason, available therapeutic antimicrobial agents are limited.

Raad et al, reported several perfusion-related outbreaks of bloodstream infection involving Staphylococci or Candida spp [9]. Frean et al have also incriminated Gram-negative bacilli such as Enterobacter, Pseudomonas, Citrobacter, and Serratia spp, as the major cause of nosocomial outbreak due to parenteral fluids [10]. Unlike other gram negative non fermenters, Burkholderia cepacia is resistant to disinfectants and antiseptic solutions [11] have unique ability to survive in standing water and significant cause of health care associated infection as a result of contamination.

Bhise S. M et al, reported an outbreak of 10 cases of neonatal septicemia in which B. cepacia colonized the indwelling intravenous catheters [12]. BCC bacteremia in cancer patients (undergoing haemodialysis) is most often polymicrobial and catheter related [13]. Other reported sources within hospitals described in the literature include disinfectants, antiseptics, topical anesthetics, respiratory therapy equipment, mouthwash, and lotions [14].

**CONCLUSION**

Our cases highlight the importance of Prompt implementation of infection control strategies which effectively controlled the outbreak and also the role of automation in early identification of the pathogen. Contaminated intravenous fluids are a rare source of bacteremia, but this possibility should be borne in mind, especially when bacteremia is due to an environmental microorganism. Strict hospital surveillance and infection control practices should be implemented to avoid hospital acquired cross infection with such pathogens. This report raises concern regarding the potential severity of Burkholderia cepacia complex bacteremia in ICU set up and the need to broaden clinicians’ suspicion for this multidrug resistant bug as they are often resistant to most commonly used antibiotics and an early use of effective antimicrobial therapy can decrease morbidity and mortality.

### Table-1: Antimicrobial Susceptibility Pattern Of All Isolates.

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Isolate 1</th>
<th>Isolate 2</th>
<th>Isolate 3</th>
<th>Isolate 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levofloxacin</td>
<td>&lt;2</td>
<td>=2</td>
<td>=2</td>
<td>=2</td>
</tr>
<tr>
<td>Ceftriaxone</td>
<td>&lt;2/38</td>
<td>&lt;2/38</td>
<td>&lt;2/38</td>
<td>&lt;2/38</td>
</tr>
<tr>
<td>Ceftazi dine</td>
<td>=32</td>
<td>=32</td>
<td>=32</td>
<td>=32</td>
</tr>
<tr>
<td>Chloramphenicol</td>
<td>=8</td>
<td>=8</td>
<td>=8</td>
<td>=8</td>
</tr>
<tr>
<td>Minocycline</td>
<td>=4</td>
<td>=4</td>
<td>=4</td>
<td>=4</td>
</tr>
<tr>
<td>Meropenem</td>
<td>≤4</td>
<td>≤4</td>
<td>≤4</td>
<td>≤4</td>
</tr>
</tbody>
</table>

*MIC: Minimum Inhibition Concentration (μg/ml)