Histoplasmosis in Bangladesh

Dr. Muhammad Abdur Rahim
FCPS (Medicine)
Registrar, Internal Medicine
BIRDEM
• **Background and introduction**

• Objectives

• Methods

• Results

• Discussion

• Conclusion
Deep fungal infection caused by *Histoplasma capsulatum*
Deep fungal infection caused by *Histoplasma capsulatum*

Mycelia
Deep fungal infection caused by *Histoplasma capsulatum*

Mycelia

Yeast
Distribution
Distribution

The distribution of histoplasmosis throughout the world (marked yellow)
Distribution

The distribution of histoplasmosis throughout the world (marked yellow).

Simplified Map of the Distribution of Histoplasmosis in the United States

Histoplasmosis has a world-wide distribution. In the United States, it is principally found in southern Ohio, southern Illinois, Missouri, Kentucky, Tennessee, and Arkansas. But it is also found in many other areas. This map is a simplified version of the one presented in Edwards LB, Acquatella FA. Am Rev Respir Dis 99 (Suppl.): 1-132, 1969.
- Immunocompetent: asymptomatic or mild symptoms
- Immunodeficient: dissemination occurs to involve lungs, oropharynx, lymph nodes, liver, spleen, skin and suprarenals
- Symptoms depend on organ(s) involvement
- Fever and weight loss are common
- *Mimics tuberculosis*
Bangladesh

- **Histoplasmosis surveys** - in 1961 and 1968-69

  - *Positive skin reaction in 12-23% patients*

- First clinical case was reported in 1982

- Cases are infrequent but increasing


Year-wise number of cases reported

![Bar chart showing the number of cases reported by year: 1982, 2005, 2010, 2011, 2012, 2013. The chart indicates a significant increase in cases in 2010 compared to other years.](chart.png)
Background and introduction

Objectives

Methods

Results

Discussion

Limitation

Conclusion
Objectives

• Socio-demographic characteristics
• Clinical features
• Diagnostic test
• Treatment
• Outcome
Background and introduction
Objectives

**Methods**
Results
Discussion
Limitation
Conclusion
Methods

• Mostly **retrospective data retrieval** from **1982-2013**

• Key words- Bangladesh, *Histoplasma capsulatum*, histoplasmosis

• “PubMed”

• “Banglajol” for articles in local journal

• “Google” search engine - gray literature search

• Personal communications
• Background and introduction
• Objectives
• Methods

• **Results**
• Discussion
• Limitation
• Conclusion
<table>
<thead>
<tr>
<th>Serial number</th>
<th>Authors</th>
<th>Journal</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Islam N, Chowdhury NA</td>
<td>BMRC Bull</td>
<td>1982</td>
</tr>
<tr>
<td>2</td>
<td>Rahman MM, Hossain SM, Dewanjee AK, Sultan MT, Faiz MA, Rahman J</td>
<td>JBCPS</td>
<td>2005</td>
</tr>
<tr>
<td>4</td>
<td>Ahmed S, Shazzad MN, Ferdous-Ur-Rahman M, Kader MA, Azad MAK, Haq SA</td>
<td>BSMMU J</td>
<td>2010</td>
</tr>
<tr>
<td>5</td>
<td>Pervez MM, Cobb B, Matin N, Shahrin L, Ford ER, Pietroni M</td>
<td>J Health Popul Nutr</td>
<td>2010</td>
</tr>
</tbody>
</table>
# Cases published

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Authors</th>
<th>Journal</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Habib SK, Patwary SA, Khan MAI, Miah MT, Gupta RD, Ahsan HAMN</td>
<td>J Medicine</td>
<td>2012</td>
</tr>
<tr>
<td>11</td>
<td>Bhuiyan MNZ, Giti S, Islam MS, Uddin MN</td>
<td>JAFMC</td>
<td>2012</td>
</tr>
<tr>
<td>12,13</td>
<td>Sadat SMA, Rita SN, Kahhar MA</td>
<td>JBCPS</td>
<td>2012</td>
</tr>
<tr>
<td>14</td>
<td>Parvin R, Uddin AKMR</td>
<td>J Gen Pract</td>
<td>2013</td>
</tr>
</tbody>
</table>
Socio-demographics

- Total 17 (published 16 + unpublished 1)
- All were male
- From all administrative divisions of the country
- Age 8-75 years
Socio-demographics

- Cultivators - 6
- Smoker - 5
- Travelling history - 4 (USA and India, Myanmar, Saudi Arabia and one sub-Shaharan African country)
HIV status

- HIV negative: 8
- Not known: 5
- New AIDS: 2
- Diagnosed AIDS: 2
Immunodeficiency

- AIDS - 4

*CD4 count in known AIDS patients were 19/µL and 4/µL*

- Diabetes mellitus - 2 (AIDS 1 + renal transplant recipient 1)

- Post-renal transplant - 1 (DM)
### Clinical features

<table>
<thead>
<tr>
<th>Symptom</th>
<th>N (%)</th>
<th>Sign</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>14 (82.4)</td>
<td>Anaemia</td>
<td>8 (47.1)</td>
</tr>
<tr>
<td>Weight loss</td>
<td>10 (58.8)</td>
<td>Cervical lymphadenopathy</td>
<td>6 (35.3)</td>
</tr>
<tr>
<td>Oro-pharyngeal ulcer</td>
<td>7 (41.2)</td>
<td>Generalized lymphadenopathy</td>
<td>3 (17.6)</td>
</tr>
<tr>
<td>Anorexia</td>
<td>5 (29.4)</td>
<td>Hepatomegaly</td>
<td>3 (17.6)</td>
</tr>
<tr>
<td>Skin rash and nodules</td>
<td>4 (23.5)</td>
<td>Hepatospleno-megaly</td>
<td>4 (23.5)</td>
</tr>
<tr>
<td>Respiratory symptoms</td>
<td>6 (35.3)</td>
<td>Splenomegaly</td>
<td>1 (5.9)</td>
</tr>
<tr>
<td>GI symptoms</td>
<td>6 (35.3)</td>
<td>Abnormal chest findings</td>
<td>4 (23.5)</td>
</tr>
</tbody>
</table>
## Investigations

<table>
<thead>
<tr>
<th>Findings</th>
<th>N (%)</th>
<th>Findings</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaemia</td>
<td>8 (47.1)</td>
<td>Raised LDH</td>
<td>2 (11.8)</td>
</tr>
<tr>
<td>Pancytopaenia</td>
<td>2 (11.8)</td>
<td>Abnormal chest X-ray</td>
<td>3 (17.6)</td>
</tr>
<tr>
<td>Raised ALT</td>
<td>3 (17.6)</td>
<td>Bilateral suprarenal enlargement</td>
<td>3 (17.6)</td>
</tr>
</tbody>
</table>
Basis of diagnosis
Basis of diagnosis

- Culture: 2
- Histopathology/FNAC: 15
Basis of diagnosis

- Culture: 2
- Biopsy/Histo/FNAC: 15

Pie chart:
- O-P ulcer: 5
- LN: 5
- BM: 3
- Suprarenal: 2
- Para-vert: 1
Form of histoplasmosis

- 14 (82.4%) Disseminated
- 3 (17.6%) Localized
Treatment

- Disseminated - amphotericin B and itraconazole
- Localized - itraconazole only
- Eight patients had anti-TB drugs
• Background and introduction
• Objectives
• Methods
• Results

• **Discussion**
• Limitation
• Conclusion
Discussion

- Clinical features - same
- Disseminated forms and suprarenal - were common
- Diagnosed incidentally - histopathological or culture
- As observed in South-East Asian series
- Urinary antigen can not be detected here
• Background and introduction
• Objectives
• Methods
• Results
• Discussion
• Limitation

• Conclusion
Conclusion

• Mildly/ (a)symptomatic, undiagnosed, under-reported

• Many patients are prescribed anti-TB drugs

• Physicians should consider as differential

• Further survey in high risk area (poultry) and population
Acknowledgement

• Prof. J. Ashraful Haque and Dr. Lovely Barai
  Dept. of Microbiology
  BIRDEM

• Dr. Ruksana Parveen
  Dept. of Medicine
  Enam Medical College
Thank you all