A CASE REPORT OF CASTLEMAN DISEASE

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PRESENTATION OF CASE

Patient aged 17 years, male was admitted with c/o breathlessness for 1 month, dry cough for 1 month, loss of appetite for 1 month, haemoptysis for 1 day, epistaxis for 1 day. No h/o recent contact with active tuberculosis, no h/o any addiction, no h/o anti-tubercular drug/ diabetes mellitus/ hypertension. General examination showed left supraclavicular, left axillary LN enlargement and swelling over left-sided anterior chest wall. On systemic examination of respiratory system, left side movement was found to be diminished and bulging was seen. Palpation- Trachea shifted towards right side and decreased vocal fremitus on the left side. Auscultation- Vesicular breath sounds were absent on the left side with no added sound.

Chest X-Ray

DIFFERENTIAL DIAGNOSIS¹

1. Human herpesvirus-8 (HHV-8).²
2. Epstein-Barr virus (EBV).³
3. Inflammation and adenopathy caused by other uncontrolled infections.⁴
4. Systemic lupus erythematosus.

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5. Rheumatoid arthritis.
6. ALPS.
7. Lymphoma.
8. Multiple myeloma.
9. Castleman disease (CD).

CLINICAL DIAGNOSIS

Initial blood investigation showed Hb- 13.5, TLC- 21,300, DLC- P82, L16, M3, Platelet- 2.40 lacs/mm³, Urea- 29, Creatinine- 0.8, Na- 135, K- 3.6, Viral markers- Non-reactive. Pleural fluid examination showed Colour- haemorrhagic, PH/reaction- acidic, TLC- 22,500, DLC- P30, L70, Mesothelial cells- present, RBCs- 25 - 30/hpf, pleural fluid biochemical examination- Glucose- 19 mg/dL, Total protein- 3.9 g/dL, Albumin- 2.6 gm/dL and ADA- 319 U/L. Pleural fluid for M cell- atypical cell present? lymphoid origin.

Management of 1st Admission

Pleural tapping was done, and 30 mL haemorrhagic fluid was aspirated and sent for investigation purpose.

To relieve dyspnoea, intercostal drainage was done on 3/12/16. Symptomatic management was done till reports were awaited. Steroid added.

CECT thorax shows heterogeneous tissue in the left ant. chest wall in costochondral region, enlarged axillary, B/L supraclavicular and left internal mammary nodes, mild pericardial effusion, mild confluent air space opacities with adjacent ground glass densities in the left lung predominantly could be infective or infiltrative? lymphadenopathy.

Ground Glass Opacities

PATHOLOGICAL DISCUSSION

FNAC from left supraclavicular and left axillary LN on 5/12/16.

Biopsy of Left Cervical Lymph Node showed Castleman Disease

HISTOPATHOLOGY REPORT

Specimen- Left cervical lymph node.

Gross- Received an irregular greyish brown tissue pieces measuring 2.5 * 2.0 * 0.5 cm. Cut surface showed 3 lymph nodes measuring 0.2 to 1.2 cm in diameter with homogeneous greyish brown cut surface, whole embedded.

Microscopic Examination

Sections from the lymph nodes show involuted lymphoid follicles with hyalinised vessels. The interfollicular areas show proliferation of lymphocytes and plasma cells and many vessels surrounded by cuffs of collagen.

Impression- Left Cervical Lymph Node- S/O Castleman Disease.

Management

Course in Hospital: No residual fluid, lung expanded, asymptomatic.

Nodes are gone both clinically and radiologically by the time patient makes arrangement for biopsy.

Patient's intercostal drainage was removed on 10/12/16 and he was symptomatically better relieved of dyspnoea and was discharged on 11/12/16 with the advice of regular follow-up.

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- **Readmission**

- Patient came into OPD with c/o Breathlessness increased for 10 days, dry cough increased for 10 days, fever for 5 days, haemoptysis for 1 day, epistaxis for 1 day and vomiting for 1 day.
- He was admitted for the same on 13/1/17. Initial investigation showed Hb- 6.3, TLC- 9800, DLC- P23, L74, M3, Platelet- 35,000, Urea- 232, Creatinine- 2.6, Na- 136 and K- 5.8.
- S. bilirubin TDI- 1
- S. protein- 5.7
- Albumin- 3.8
- SGOT- 65
- SGPT- 16
- SAP- 145
- PT- 15/19.8
- APTT- 40/40
- GBP showed RBCs- predominantly normocytic normochromic and WBCs- TLC within normal limits with lymphocytosis.
- Platelet reduced.
- Bone Marrow examination was done.
- Patient had developed multi-organ dysfunction as platelets, coagulation profile and acute kidney injury.
- Pleural fluid on 13/1/16- Pleural Fluid ADA- 140 U/L.
- Pleural fluid for M cell- Atypical cells present.
- (? Lymphoid in origin), PCR- MTB DNA- Detected.
- Patient succumbed on 14/1/17 to multiorgan dysfunction.
- Patient survived for just one day after second admission.

FINAL DIAGNOSIS

This case report brings to light the importance of obtaining definitive histological diagnosis in patients presenting with lymphadenopathy and systemic symptoms. Multicentric Castleman's disease is a relatively uncommon cause for such a presentation.⁵ Though, clinically synonymous with lymphoma, it is an entity that is distinct from malignant lymphoproliferative disorders histologically and prognostically.⁶ It may be borne in mind as a differential diagnosis in lymphadenopathic presentations with symptoms of systemic involvement.⁷

DISCUSSION WITH MANAGEMENT

- Castleman disease (CD) is a rare disease of lymph nodes and related tissues.⁸ It is a heterogeneous group of lymphoproliferative disorders that are sometimes associated with human immunodeficiency virus (HIV) and human herpesvirus 8 (HHV-8).⁹
- Although, Castleman disease is not cancerous, it may also be associated with malignancies such as Kaposi sarcoma, non-Hodgkin's lymphoma and Hodgkin's lymphoma.¹⁰

Localised versus Multicentric Castleman Disease

- **Localised or Unicentric-** Confined to single group of nodes, usually chest or abdomen.¹¹
- **Multicentric-** More than one group; also, organs having lymphoid tissue; associated with HIV, HHV-8 and EBV; may transform to lymphoma.¹²

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Epidemiology

Rare, Mean age 50 - 65, Person with HIV are younger, 50-65% cases are male.¹⁵

Incidence has increased with ART.¹⁶

Presentation- Unicentric or localised Castleman disease is generally asymptomatic, but may cause the following symptoms.

- Localised lymphadenopathy with resultant compressive symptoms.¹⁷
- Systemic symptoms like those of MCD.¹⁸

Treatment- Unicentric

Surgery is usually curative. In patients whose lesions cannot be completely resected, outcomes remain favourable.¹⁹ Partially resected masses may remain stable and asymptomatic for many years.

Patients with unresectable diseases with compressive symptoms can be treated as described for HIV-negative MCD.²⁰

Systemic steroids can provide symptomatic relief, but do not predictably reduce tumour size.²¹

Radiation therapy with 30 - 45 Gy can result in complete and partial remission rates of 40% and 10% respectively, but can cause radiation-induced fibrosis that makes subsequent surgical intervention more difficult.²²

Treatment Multicentric

IL-6-directed therapy. Especially in HIV/ HHV-8-negative patients with mild symptoms and no organ failure, immunotherapy with monoclonal antibodies directed at IL-6 (siltuximab) or the IL-6 receptor (tocilizumab) was reported to yield a 2-year overall survival rates and relapse-free rates of 94%-95% and 79%-85%, respectively.^{23,24}

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