From: "ROOT" <root@sctimst.ac.in>
To: "ROOT" <root@sctimst.ac.in>
Date: 04/09/2024 08:10 AM
Subject: CPC Clinical Protocol 04.09.2024

Dear All,
Season's Greetings.
The next Wednesday CPC of the session will be held on **September 04, 2024** at 08.00 hours (IST) in **Lecture Theatre 1**, Nehru Hospital, PGIMER, Chandigarh.

The session will also be available on the Webex platform. Kindly follow the link below to join.
https://telemedicine.webex.com/telemedicine/j.php?MTID=mb8f5c93d0efe86e2ec7df721b3c21227

In case you join in thru WebEx, kindly **ensure that your microphone and camera are switched off** and **PLEASE DO NOT SHARE YOUR SCREEN**.

The Clinical handout of the case to be discussed is attached herewith.
The clinical protocol will be discussed by ***Dr. Deba Prasad Dhibar, Department of Internal Medicine.*** Radiology will be discussed by ***Dr. Uma Debi,*** Hematology will be discussed by ***Dr. Sreejesh S*** and Cytology will be discussed by ***Dr. Parikshaa Gupta***. Autopsy pathology will be presented by ***Dr. Amanjit Bal.***

Yours sincerely,

--
Regional Resource Centre, North
Department of Telemedicine
PGIMER, Chandigarh

Staff CPC: Clinical Protocol (4th September 2024)

Discussant: Dr. Deba Prasad Dhibar (Clinical), Prof. Amanjit Bal (Pathology),
Dr. Uma Debi (Radiology), Dr. Sreejesh S (Hematology), Parikshaa Gupta (Cytology)

Patient particular: Mr SK (29 Y/M), Resident of: Kurukshetra (Haryana)

CR. No. 202402092511, Admitted under: CHMO services (Prof. Pankaj Malhotra)

Duration of hospital admission: 30th April to 4th May 2024

Chief complaints: Fever X 4 months, Cough with mild expectoration X 3 months,
Shortness of breath X 3 weeks, Skin rash X 2 weeks

History of presenting illness (HOPI): Apparently well 4 months back

H/o fever for 4 months: intermittent(101^0 F) a/w chills and rigor and generalized weakness. There was no history of evening rise of temperature and the fever resolved partially with oral medications

Cough X 3 months: insidious in onset, gradually progressive, associated with mild expectoration, there was no history of hemoptysis

Shortness of breath X 3 weeks: insidious in onset, gradually progressed to mMRC-IV, no h/o chest pain, orthopnea, PND

Skin rash X 2 weeks: petechial rash spreading all over the body

Past history: No h/o previous co-morbidity, **Family history**: Nothing contributory

Personal history: Vegetarian diet, sleep, bowel, bladder habit are normal and regular, no h/o any substance abuse

General Physical Examination:

Vitals: PR- 120/min, BP- 80/50 mm Hg, RR- 26/min, SPo2- 88% @ RA, Temperature-afebrile

Patient was conscious, co-operative, oriented to time & place.

Pallor: 1^+, Oedema: b/l pitting pedal oedema present, Lymphadenopathy: Multiple, right supraclavicular LN 2X2 cm, Right axillary LN 1X1 cm, B/L inguinal LN+

Icterus/Cyanosis/Clubbing: were absent

Petechial skin rash spreading all over the body, not palpable

Systemic examination:

Respiratory: B/L normal vesicular breath sound, B/L basal crepitation present

Abdomen: Distended, non-tender, flanks were full; shifting dullness was absent, hepatosplenomegaly palpable

CVS and CNS: WNL

Investigation: CBC

Date: 2024	30/3	01/05	02/05	03/05
Hb (g/dl)	9.2	7.1	6.6	6.4
PLT (10^9/L)	96	16	6	5
TLC (10^9/L)	22.72	3.2	2.66	3.66
Neutrophil (%)	23.9	12.0	40	65
Lymphocytes (%)	8.7	19.0	38	7
Eosinophil (%)	62.9	3.1	8.0	5
Monocytes (%)	4.3	65.7	14	23
AEC (10^9/L)	14.29	0.1	0.21	0.18

Biochemistry:

Date:2024	30/3	01/05	02/05	02/05	03/05	04/05
Na/K+ (mMol/L)	136/3.8	135/3.2	133.8/4.57	143/3.8	140/4.1	145/4.9
U/Cr (mg/dL)	32.9/0.98	109/1.42	102/1.75	117/1.66	129/1.82	185/2.33
AST/ALT/ALP (U/L)	13.1/6.6/32.9	200/79	225/66/1858	300/79/1850	314/82/1233	481/92/1139
Bilirubin (T/D, mg/dL)	1.32/0.47	3.80/2.27	2.87/1.83	3.15/2.39	3.48/2.60	5.27/4.0
Pro/Al (g/dL)	8.0/4.0	6.1/2.67	5.08/2.42	5.5/2.36	5.4/2.4	5.66/2.26
Ca/Phos/UA (mg/dL)	9.22/4.99/4.5		6.63/2.67/12.1	6.61/3.88/14.1	6.65/4.60/15.4	6.69/5.9/14.6
TG (mg/dL)			272		172	
LDH (U/L)			1858	2008	2244	2520

Coagulation profile –

Date:2024	01/05	02/05	03/05
PT (Sec)	15.4	18.5	17.6
PTI (%)	77	64	67
aPTT (Sec)	40.1	38.6	34.4
INR	1.3	1.56	1.49
Fibrinogen (g/L)			0.79
D-dimer (ng/mL)			839

Urine RE/ME:
02/04/2024: **Protein/Sugar-**Nil**, Puss cell-**full field**, WBC cellular cast-**present
01/05/2024: **Protein/Sugar-**Nil**, Blood-**3^+
02/05/2024: **Protein-**1^+**/Sugar-**Nil**, WBC/Puss cell-**Nil**, Blood-**2^+
Stool Examination:
02/04/2024: **RE/ME: Pus cell/ RBC/Trophozoite/Cyst/Ova/Atypical organism:** Negative
Special staining for Parasite like Cryptosporidium Negative
Filarial antigen: negative
Blood Culture: Sterile X2**, Staphylococcus haemolyticus** X1 (01/05/2024)**, Urine culture:** Sterile (01/05/2024)
Procalcitonin: 2.50 ng/mL (02/05), **Beta-D-Glucan:** 87 (03/05)
Ferritin :11228 ng/mL (02/05/2024)
Cardiac markers: Pro-BNP: 2773 (2/5), 12086 pg/mL (3/5),**Troponin T:** 116 pg/mL (2/5), 220 pg/mL(3/5)
ANA-negative
Serum electrophoresis: Moderate hypergammaglobulinemia (04/05/2024)
Viral markers: HIV/HBV/HCV- Negative
USG abdomen (01/05/2024): Hepatosplenomegaly, Liver-17.1 cm, Spleen-17 cm, Moderate ascites, mild left pleural effusion

CECT chest and abdomen (01/05/2024)**:** Hepatosplenomegaly, b/l pleural effusion, gross ascites, Mediastinal, retroperitoneal, pelvic, inguinal lymphadenopathy
2D echocardiography: Normal ejection fraction with mild pericardial effusion
FNAC axillary LN (A-2441/2024, 30.04.2024): Overall cytomorphological and immunophenotypic feature are of reactive lymphoid hyperplasia. Around 30% of cells (lymphocytes) showed dual expression for CD4 & CD8.
Bone marrow (Tx-746/24, 12.04.2024): Hypercellular bone marrow with marked eosinophilia (28%), megakaryocytic hyperplasia, and grade 1 fibrosis. A myeloproliferative or eosinophilia-associated neoplasm need to be excluded.
Flow cytometry (LL-526/24, 13.04.2024): Overall immunophenotypic features are suggestive of abnormal CD4 & CD8 dual positive T-lymphoblast
FISH panel (13/04/2024): Abnormal FISH report- deletion of 4q12(CHIC2) and 4q12 (FIP1L1), suggestive of a variant PDGFRA rearrangement. Normal FISH report- no evidence of 5q32(PDGFRB), 8p11(FGFR1), 9p24(JAK2), 9q34(ABL1) and 12p13(ETV6) rearrangement.
RT-PCR for BCR-ABL1 fusion gene (A-945/24, 24.04.2024): negative
Course & management: A 29-year gentleman with no previously known comorbidity, presented with h/o intermitted fever (101^0 F) associated with cough with mild expectoration for 3-4 months, followed by progressive shortness of breath for 3 weeks and skin rash for 2 weeks. He was being evaluated at MOPD and was found to have hepatosplenomegaly with hypereosinophilia (62.9%, AEC: 14.29 $X10^9$/L), leukocytosis (22.72 $X10^9$/L) with anaemia (9.2 g/dl) and thrombocytopenia (96 $X10^9$/L). He was worked up for the infective causes of hypereosinophilia and bone marrow biopsy was advised. Stool Examination for the Trophozoite/Cyst/Ova/Atypical organism and Cryptosporidium were negative. Blood for filarial antigen was also negative. Bone marrow biopsy showed hypercellular marrow with marked eosinophilia (28%), megakaryocytic hyperplasia, and grade 1 fibrosis with flow cytometry showing abnormal CD4 & CD8 dual positive T-lymphoblast with possible myeloproliferative or eosinophilia-associated neoplasm. RT-PCR for BCR-ABL1 fusion gene was also negative. Unfortunately he was lost from the follow up and was admitted at private hospital and subsequently presented at our emergency with worsening shortness of breath and skin rash. On examination the patients was in shock (BP- 80/50 mm Hg) with tachycardia (PR- 120/min), tachypnea (RR- 26/min) and hypoxia (SPo2- 88% @ RA). He had pallor, generalized lymphadenopathy, pedal oedema, hepatosplenomegaly with petechial skin rash spreading all over the body. Investigations showed severe anemia (6.6 g/dL), thrombocytopenia (6 $X10^9$/L), leucopenia (2.66 $X10^9$/L) with acute kidney injury (Cr 1.75 mg/dL), transaminitis (OT/PT 225/66 U/L) and coagulopathy (INR 1.56). He was managed with IV fluid and inotrope infusion, oxygen supplementation and antimicrobials injections in the view of ongoing sepsis, DIC and MODS. Prednisolone was initiated at 1mg/kg/day initially subsequently high dose dexamethasone (16 mg) was administered pre-terminally due to high suspicion of lymphoproliferative diseases with hypereosinophilia. Despite best possible medical management his condition deteriorated requiring mechanical ventilation and subsequently had cardiac arrest and was declared dead on 4th may 2024.
Unit's final diagnosis: T-cell non-Hodgkin's Lymphoma with Hypereosinophilia
Sepsis with Multi organ dysfunction syndrome (MODS)
Cause of Death: Type-I respiratory failure with refractory septic shock

Attachments:

File: Clinical Clinical Protocol 04.09.2024.pdf	Size: 146k	Content Type: application/pdf