From: "ROOT" <root@sctimst.ac.in>
To: "ROOT" <root@sctimst.ac.in>
Date: 30/10/2024 07:53 AM
Subject: CPC Clinical Protocol 30.10.2024

Dear All,
Season's Greetings.
The next Wednesday CPC of the session will be held on **October 30, 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. Gaurav Prakash, Department of Internal Medicine.*** Radiology will be discussed by ***Dr(s). Manphool Singhal/ Dr. Madhurima Sharma.*** Autopsy pathology will be presented by ***Dr. Ritambhra Nada.***

Yours sincerely,

Staff CPC 30-10-2024

Patient: SS, 53/M		**Chairperson**	Dr Sanjay Jain
Labourer form Punjab		**Clinicals by:**	Dr Gaurav Prakash
DOA:22/7/24, DOD: 27/724		**Radiology by:**	Dr Manphool Singhal/ Dr. Madhurima Sharma
Clinician I/C: Dr Pankaj Malhotra		**Pathology by:**	Dr Ritambhra Nada

First admission Under Nephrology services

Presenting complaints (1st March 2024-20th March 2024) Progressive bilateral pedal oedema for 1 year associated with periorbital swelling and frothy urine. He reported decreased urine output (decreased for last 3 months 200-300 ml/24 hour) along with history of progressive breathlessness on exertion (NYHA I→III). It was insidious in onset and associated with cough without expectoration, no chest pain, no orthopnea or PND. Took indigenous medicines for 2- 3 months before admission. Prior to this admission, he was evaluated in cardiology OPD and found to heave DCMP. Coronary angiography was normal, hence he was sent to Nephrology OPD.

Past History: No history of diabetes, hypertension, TB, or any other hospitalization, major surgery or allergy in the past.

Personal History: Predominantly vegetarian diet, Alcohol, tobacco smoking and chewing; occasional for 15-20 years

Examination: BP min 86/56 mmHg, max100/74mmhg, RR 22/minute, HR 110/minute, SpO2 – 98%@RA. Oral Cavity – normal, generalized edema++, scrotal edema+

Liver palpable- 3-4 cm below costal margins, Spleen-NP; No S3 or Cardiac murmur

Investigations (In the first admission)

Inv	**11/3/24**
Hb, g/dL	**8.8**
MCV	**60**
TLC, (*10⁹/L)	8120
DLC (N/L%)	57%/23.8%
Platelets, (*10⁹/L)	213
BU/Creat, mg/dL	**88/2.29**
Bilirubin, mg/dL	0.27
Prot/Alb, mg/dL	**4.7/2.72**
AST/ALT, U/L	29/22
Alk Phos, U/L	153
Ca/PO4, mg/dL	**8.42/5.73**
Magnesium, mg/dL	2.2
TC: 275, LDL: 196, TG: 156,	

URE- pH 7.5, Protein 4+, Glu- nil, RBC-nil, Pus cells 3-5/hpf

24h UP: **5.08 gm**/day,

AntiPLR2 antibody- negative

ProBNP: **15771**

SPEP:0.15g/dl SIFE: **IgA Lambda**

S.FLCA: κ:λ=74.69:**180** Ratio-0.41

RENAL BIOPSY (5.3.24, S-6527/24): AL amyloidosis, λ restricted

RECTAL BIOPSY (13.3.24, S-7244/24): non-specific inflammation

BM biopsy (19.3.2024, A-693/24): 4% plasma cells with amyloid deposits

Cardiac MRI (18.3.24, PG248611): s/o Amyloidosis

FBG= 80mg/dl, HbA1c=5.9g/dl

ANA-neg, Sputum AFB- neg

HPLC- Beta Thalassemia trait

Imaging:
2D echo (March24) – E>>A, LVEF-45-50%, mild MR, TR, RVSP=RAP+20mmhg, Inter atrial septum 1.6 cm **CECT(chest +abdomen)(7/3/24)** Early centrilobular emphysematous involvement in bilateral lung Mild pericardial effusion (thickness 9 mm) liver is enlarged measures 18.9cm with normal attenuation. No IHBRD, HV and PV are normal Spleen- 11.9 cm normal attenuation RK-10.4,LK9.5 shows normal outlines **Cardiac MRI**- Concentric LV RV hypertrophy with EF 39%, Diffuse subendocardial enhancement

Treatment -
For AL amyloidosis, he was treated with VCD (Bortezomib, cyclophosphamide &Dexamethasone) and referred to the Department of Clinical Hematology and Medical Oncology. He completed 4 cycle of treatment (each cycle consists of weekly doses of all three agent).

Second admission (22/7/24-27/7/24) (Last admission) under CHMO services

Presenting complaint-

1. Loose stools, watery in consistency (Bristol Stool Scale 6-7). Over the past ten days

2. Followed by oliguria and worsening shortness of breath (mMRC grade from II to IV), along with anasarca and swelling in both lower limbs with skin changes.

No H/o blood in stool or undigested food particles. No history of chest pain
On Examination-Sick, tachypneic, pallor+, Anasarca+, PR 94/min, BP-90/60mmhg, RR 26/min
Chest- B/L Crepitations, Abdomen- hepatomegaly, no splenomegaly, bowel sounds+

ECHO- (May-2024) LV wall thickness 11mm, EF 50%, Mod MR,
Severe TR, RSVP=20+RAP
ECHO- (23-7-2024) Global Hypokinesia (LAD>LCx),visual EF 40-45% No MR AR TR, Mild Pericardial effusion

Date	23.07.2024	24.07.2024	25.07.2024	26.07.2024
Hb (gm%)	**4.7**	5.1	4.9	6.1
TLC($\times 10^9$/L)	**3.8**	2.6	2.95	5
Platelets($\times 10^9$/cu.mm)	**18**	11	6	14
Na / K	141/5.17	134/3.89	135.9/4.06	129/3.28
Urea/Cr	**327/4.28**	**177/2.43**	**188.7/2.73**	**101/1.50**
Ca/Ph/Mg	7.5/-	-	7.52/5.34/2.50	-
Bilirubin (T/C)	0.89/0.44	1.32/0.60	1.07/0.76	1.52/0.77
TP/Alb	**4.3/1.82**	**4.7/1.84**	**4.28/2.03**	**4.9/2.05**
OT/PT/ALP	95/75/-	88/63/-	71.5/52.1/193	106/55/-

Uric acid 13mg/dl (on 25-7-2024)

Coagulogram- PT 16s (10-13s), PTI 72%, aPTT- 26

CRP- 28 mg/L

URE (27-7-2027)

- Protein +++
- Blood +

CKMB- 18.6 U/L – (7-25)

Hemolytic w/u

- Plasma Hb- nil
- Urine Hb- nil
- Haptoglobulin 195(36-195)
- DCT- Negative

DATED	24.7.24	27.7.24
pH	7.421	7.506
pCO2	34.7	27.3
pO2	26.3	40
HCO3	22.1	21.1
Lactate	**5.47**	**4.89**

Blood culture (23-7-24) collected after death of the patient. –
(1) Acenatobactor baumanii (Pan-resistant:- Carbapenem, Colistin, Pip-Taz) ,
(2)Enterobactor faecium (S- only Linazolid)

Imaging:

CXR- Rt Pleural effusion, Cardiomegaly
HRCT chest – Right sided pleural effusion with underlaying consolidation in right lower lobe .

Course and management

In March 2024, a 53-year-old male presented with adult-onset nephrotic syndrome, heart failure, and hepatomegaly. He was diagnosed with systemic AL amyloidosis, with cardiac and renal involvement, and received four cycles of Bortezomib, Cyclophosphamide, & Dexamethasone. In July2024, He was admitted again with complaints of diarrhoea, oliguria, and shortness of breath. Upon admission, his creatinine level was 4.28mg/dl, and his urea level was 328mg/dl. Due to low urine output and low BP, noradrenaline was started and dialysis support was provided. HRCT chest revealed right lower lobe consolidation with pleural effusion. IV antibiotics: cefoperazone with sulbactam in renal modified doses, changed to Imipenem and Vancomycin considering septic shock and indwelling dialysis catheter.

However, there was little improvement. He continued to require intravenous norepinephrine support and dialysis was continued with conservative fluid management. On July 27, 2024, the patient deteriorated, his sensorium worsened and he became hypoxic. He was intubated, and a second inotrope was introduced.

At 2:00 PM, the patient's vital signs became unrecordable. Cardiopulmonary resuscitation (CPR) was initiated. The patient was declared clinically dead at 2:36 PM.

Unit's final diagnosis- Primary AL Amyloidosis, with AOCKD, Amyloid related cardiac dysfunction, Sepsis
Cause of death- Septic shock