Clinico- pathological case discussion

Date 5 th August 2019

Dept. of Medicine and Dept. of Pathology

A 25 year old lady, 2 months post-partum presented with history of fever of about 3 months. The patient was apparently asymptomatic about 3 months back. In the 7th month of her gestation (primigravida), she developed low grade fever with chills & swelling of both legs up to ankles for around 10 days before onset of labor. She delivered in the 8th month of gestation on 18.07.19 - normal vaginal delivery in the Taluk Hospital. In view of persistent fever, she was taken to Cuddalore GH following delivery. She was admitted there from 20.07.2018 - 31.07.18. She was given treatment (no records available). She was referred to a private hospital as a case of fever with joint pains.

At the private medical college hospital she was admitted from 31.07.2018 to 21.08.2018. She presented there with about 3weeks history of fever. Workup for fever was done. Initially puerperal sepsis was considered. Retained placental products were evacuated. She was initially given piperacillin/tazobactam & metronidazole empirically for puerperal sepsis. Investigations at that hospital were as follows:

Total count 25,000 Urea/Creatine – 20/0.48

DC - N85 L5, Hb - 9.5, LFT – Total Bilirubin / Direct Bilirubin – 0.6 / 0.2

Platelets - 3.72L, Serum Total Protein / Album – 6.2 / 3.2, SGOT / SGPT - 228/146

TFT – Normal, ESR – 128, CRP – Positive, Scrub IgM – Positive,

HIV, Malaria, Dengue, HBsAg, RF, Anti-CCP, ASO titers – Negative.

ECHO – Normal USG KUB – Right sided HUN CT KUB – No Calculus

She was given azithromycin for 5 days, apparently in view of positive IGM scrub

Pus from episiotomy wound grow – Klebsiella pneumoniae (S) to meropenem.

She was later started on Inj. meropenem. She was also given Inj. Hydrocortisone. She became afebrile in the hospital.

Serial lab reports in that hospital

Date	Hb	TLC	Platlet	Albumin	AST	ALT
04.08.2018	8.3	12900 (n-80, l-11)	2.24 Lakhs	2.6	88	81
07.08.2018	8.9	12500 (n-71, l-18)	3.0 Lakhs	2.6	186	87

10.08.2018	8.1	15300 (n-84, l-8)	2.9 Lakhs			
13.08.2018	8.2	9900 (n-58, l-34)	2.65 Lakhs			
20.08.2018	8.6	11000 (n-66, l-29)	2.07 Lakhs			

She was discharged on tab. prednisolone 40mg OD. She was advised to take Inj. meropenem for 6 more days from local clinic / hospital and was advised to follow up after a week. She did not follow up in the hospital further. After about a week at home, she started having fever again. After two weeks of fever at home, she returned to the same private medical college hospital from where she was referred to JIPMER on the same day

No H/o cough / breathlessness / vomiting / jaundice / hematemesis / malena / rash / ear discharge / PV discharge. No H/o recurrent oral ulcers / alopecia / dryness of mouth / eyes. No h/s/o Raynaud's or photosensitivity. No H/o weight loss, but h/o loss of appetite present

Past H/o: No H/o similar illness in the past. No H/o / DM/ HTN / Asthma / Epilepsy/Thyroid disease. No past H/o TB. No h/o native medications intake

Family H/o: Not Significant

Menstrual H/o: Regular cycles, 5/30 days. Currently 2 months post partum

On examination at admission the patient was conscious and oriented, febrile (1040F). Pulse – 120 /min, regular all pulses felt, BP – 96 / 60 mm Hg, SpO2 – 98% on room air, JVP not elevated, mild pallor (+), bilateral pitting pedal edema up to knees, no icterus, clubbing. Lymphadenopathy: right submandibular mode 2X 1cm, firm, tender, right axillary node 1 x 1 cm. Small palatal ulcer on roof of palate, angular stomatitis (+)

CVS: S1 S2 (+) S3 gallop (+) no murmurs

RS: Decreased breath sounds in right IAA / AA / ISA

P/A: Soft, mild diffuse tenderness (+), No hepatosplenomegaly

CNS – HMF normal, No FND

MSK: Tenderness (+) in both wrists, left knee & left ankle, no swelling.

Course in JIPMER:

As on 22/9/18, she has had fever for nearly 3 months; initially persistent for 3 to 5 weeks, then afebrile for about 1 to 2 weeks and again persistently since last 2 weeks; joint pain since x 3 weeks and loose stools x 4 days
She was started on cefoperazone / sulbactam on day 1

Immunology opinion: Suggested DCT, ICT, blood culture, ferritin; to consider MAS

OG opinion: episiotomy wound: mucosal gaping and slough + cleaning with betadine done. Pus was sent for C/s & slough removed

In view of high grade fever, meropenem was started on day 3 (cefaperazone /sulbactam stopped). Oral metronidazole was also added. Marked hypoalbumnaemia, hypergammaglobulinaemia. Hypokalaemia

Fever was persisting (103oF) / loose stools persisted-several episodes / day
During hospital stay on day 3, a new ulcer on left tonsillar fossa & left side of hard palate and left anterior pillar of tonsil was detected (26/09/18). ENT opinion was obtained.
Day 5(26.09.2018): ENT opinion: Oral :angular stomatitis, aphthous ulcer on buccal mucosa, palate. Oropharynx: Dirty white membrane covering tonsils L>R; on removal no bleeding, on examination grade II tonsillar enlargement, Level II node 1*1cm, ? membranous tonsillitis/granulocytosis/ malignancy tonsil/lymphoma/?oral candidiasis. Wound swab from episiotomy showed Klebsiella pneumoniae resistant to all; Enterococcus faecalis sensitive to vancomycin. Vancomycin was added to meropenem
Ophtal opinion: Normal. Fundus normal

Day 6 (27.09.2018) Persistent fever, developed cough. On examination mild tachypnoea, RS: right Infra scapular area, right infra axillary area coarse crackles,mild splenomegaly, R knee pain ++ , R knee tenderness ++. Cytopenia persisting, ferritin > 2000.Albert's stain/AFB/KOH from the palatal ulcer was negative. The palatal ulcer later perforated leaving a small hole in the palate.

Day 7 (28.09.2018) MGE opinion advised UGI endoscopy. High grade fever persisted despite antibiotics On day 8, (29.9.18). ANA was negative. A trial of NSAIDs was given for 2 days after which she became afebrile for next 3 days. Palatal ulcer/perforation biopsy was done

On day 10 (1/10/18) UGIE was done which showed multiple small ulcers in esophagus & stomach. In the evening the abdominal pain increased in severity; with increased frequency of loose stools. She has one episode of black coloured stools. CECT thorax &

abdomen done on that day showed terminal ileum / caecal/ as ending colon / transverse colon edema with? (R) colic artery distal cut off - mesenteric vasculitis (provisional)

On day 11 (2/10/18) Surgery opinion was taken in v/o ongoing severe abdominal pain & abdominal distension suspecting mesenteric ischemia or perforation. Surgery opinion-No e/o perforation. P/o mesenteric ischemia to be considered SGE opinion: Advised colonoscopy to rule out medical causes. In view of persistent fever, perforated palatal ulcer, ANCA associated vasculitis considered. P ANCA C ANCA reports awaited. One dose of pulse methylprednisolone was given.

Day12 (03.10.18) She had a high spike of fever. The patient was shifted to MICU as she was worsening. She developed progressive metabolic acidosis, hypotension. She was started on inotropes. Inj. colistin was added. SGE review CECT suggestive of wall thickening of ascending colon, mucosal enhancement, mesenteric fat stranding, multiple lymph nodes. No surgical intervention required

On day 13 (04.10.18) Later she was intubated and ventilated. She succumbed on 04-10-2018.

Date	**Hb/PCV**	**TLC**	**DLC**	**Platelets**
22.09.18	6.7	3020	N30 L60 M10	1,00,000
23.09.18	6.3		N15 L65 M20	1,30,000
25.09.18	6.5	2160	N45 L49 M4	1,16,000
28.09.18	6.2	3730	N52.6 L45	1,94,000
04.10.18	6.0	1060	N49 L45	20,000

Biochemistry

Date	B.gl	Urea	Cr	Na	K	Ca	Mg	IP	UA	T.Bill	Bill (D)	STP	Alb	AST	ALT	GGT	ALP
23.09.18	91	27	0.72	131	2.8												
25.09.18	61	15	0.56	134	2.8	6.1	1.14	1.7	1.7	0.66		5.7	1.6	19	9	38	94
27.09.18	<60	9	0.46	131	3.17	6.5	2.14	3.5									
29.09.18	79	8	0.45	129	2.82	6.7	1.39	3.2									
01.10.18	62	6	0.56	130	3.09				1.3								
02.10.18	142	15	0.73	132	3.47					2.54	1.73	3.9	0.9	13	18		81
03.10.18	278	24	0.68	123	3.02												

Urine Analysis

Date	Alb	Sug	Microscopy
25.09.2018	Trace	Nil	2-3PC / Nil RBC

03.10.2018	1+	Nil	5-6 PC / 3-4 NRBC
			1-2 Squamousepi
			Bacteria 1+

Cultures

Date	Specimen	Organism	Susceptibility
23.09.2018	Blood	Sterile	
26.09.2018	Urine	Sterile	
26.09.2018	Blood	Sterile	
27.09.2018	Episiotomy Wound	Klebsiella , Enterococcus	Klebsiella Pan Resistant, enterococcus (S) to Vancomycin

Serology Miscellaneous

HIV – ELISA	Negative
HBs Ag	Negative
Anti – HCV	Negative
Para F/QBC	Negative
Widal	Negative
RA Factor	Negative

24.09.2018 Procalcithonin - 2.13 ng / ml

24.09.2018 CRP: 2.4 mg / dl

26.09.2018 Stool ova/ cyst – Negative

27.09.2018: Spot protein creatinine ratio was 3.04 (0-0.20)

28.09.2018: Stool microscopy negative

28.09.2018: C3 – 0.613 (0.9 – 1.8 g/L) - Low

C4 – 0.146 (0.1 – 0.4 g/L) - Normal

28.09.2018: Bone Marrow aspiration: Cellular reactive marrow

29.09.2018: Gene Expert Negative from palatal ulcer

29.09.2018: ANA - Negative

Palatal biopsy showed only necrotic tissue

Serum ferritin > 2000

USG 22.9.18: Mild splenomegaly, minimal ascites

USG 1.10.18: Mild hepatomegaly, minimal ascites

USG 1.10.18: caecum and ascending colon show smooth concentric wall thickening sugg of edema. Mesenteric fat thickening noted in the RIF. Appendix not visualized separately

ECHO heart: 24.0.2018 Normal study