Sri Sringeri Sharada Peetham Charitable Trust

Rangadore Memorial Hospital

Sri Sringeri Math & BKF Initiative

1st Cross, Shankarapuram, Basavanagudi, Bengaluru 560004 Tel.: +91 80 2698 3333 / 22 / 00 Email :info@rmhospital.in

INTERIM SUMMARY

NAME : VISHWAS
AGE : 7 years
SEX : MALE
RMHID NO :2025355
Consultant : Dr. Gurudut& Dr Nidhi

DATE OF ADMISSION :29/9/22

WARD : PICU
IP NO: 2204988

Diagnosis :

SEVERE BRONCHOPNEUMONIA WITH RIGHT LOBAR CONSOLIDATION
SEVERE ACUTE RESPIRATORY DISTRESS SYNDROME
SEPTIC SHOCK WITH MULTIORGAN DYSFUNCTION SYNDROME
MECHANICAL VENTILATION DEPENDENT
K/C/O RECURRENT LRTI AND CLUBBING
LEARNING DIFFICULTIES

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Procedure done :

Right radial arterial line on 29/09/2022
Right IJV central line on 29/09/2022
Bronchoscopy and lavage done on 07/10/2022
Re-intubation on 6/10/2022 and 11/10/2022

Presenting Complaints :

Fever for 5 days 1week back
Vomiting 3-4 days 5 days back
Pain Abdomen since 3-4 days 5 days back
Difficulty in breathing for 3 days
Decreased intak for 3 days

History :

A 7 year old female child was apparently normal 1 week back , he developed fever, moderate - high grade, intermittent type, responding to anti-pyretic lasted for 5 days.
he also had episodes of vomiting which contained food particles, non blood stained , non bile stained lasted 3-4 days associated with abdominal pain.
c/o difficulty in breathing for 3 days.

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h/o decreased oral intake for 3 days
No h/o any bleeding manifestations.
With above mentioned complaints child was reffered to RMH for further evaluation .

Treatment history:
The child was consulted on OPD basis for fever and taken symptomatic treatment. CBC done on 26/9/22 showed TLC- 15000 ,Hb-12.7, PLT-2.37 lakhs , Dengue NS1 and IGM was positive. child was started on iv drips on opd basis and inj 3rd generation cephalosporin. Child sypmtoms worsened and child was admitted kusuma hospital on next day and treated for above mention complaints . IV Meropenem was started alongwith oxygen support. In view of worsening distress child was referred to RMH for further care.

Developmental History : All developmental milestones achieved till date with 3 to 4 months delay .

Past History : child admitted cloud nine hospital at 9 months of age for 9 days(antibiotic and nebulisation given) every 6 months to 9 months child was treated for pneumonia.

Family History :
No significant illness in the family.

Allergies : No known allergies

Birth history: born by lscs, Nicu stay for 3 days details not known. BW: 3.5 kg

GPE : unstable

Vitals at admission :

Heart Rate : 145 b/min
SPO2 : 78-80 % @ RA
BP- Not recordable

Resp Rate : 70-80/min
GCS : 11/15
Pupils : Bilaterally reactive to light

Temp : 99 °F
CRT : prolonged

Anthropometry :
Weight : 20kg

Systemic Examination :

CHEST : Bilateral breath sounds+, tachypnoea +, abdominothoracic incordination(sea saw movement), b/l crackles+, SCR+, ICR+, suprasternal recession+
ABDOMEN : Soft, no distension ,bowel sounds+
CVS : S1 S2 heard. No murmurs. Thready pulses.
CNS : Tone / Power / Reflexes – Could not be ellicited B/l plantar reflexes: flexor
ENT : Normal
SKIN : normal

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Course in Hospital :

A 7 year old male child was brought to the ER with shock with respiratory failure. Initial VBG done in the ER showed Ph-7.158, bicarb-24, Pco2-3,BE—5.4, Lac-4.97 . In view of shock child was given 10ml/kg iv bolus and connected to 02 with NRM. Child was started on adrenaline infusion at 0.2mcg/kg/min in view of shock . Child was intubated with cuffed tube of size 6 and then shifted to picu PICU for further management.

IN PICU FOLLOWING CONCERNS ARE ADDRESSED :

RESPIRATORY SYSTEM/ARDS:

Chest xray showed right side white out lung with consolidation witl left lung upper lobe collapse/ consolidation. Child as connected to PRVC/SIMV mode with fio2 of 100%, peep: 8, TV: 130ml, P peak: 40 , following child was maintaining at 92-94% saturation. Second VBG done showed PH:7.225, PCO2: 61.2, PO2: 142, BE-3.1, HCO3: 24.8, LACTATE:4.50. Because of high p peak child was put on prone ventilation ,but it didnt show improvement in oxygenation. CT chest was done to rule out foreign body/collapsed lung which showed consolidation involves entire right lung, patchy consolidation in right upper lobe, mild b/l pleural effusion more on right side. Dr. Bharath Reddy's (pulmonologist) opinion was taken , advised to continue antibiotics and consider bronchoscopy if child is requiring high ventilatory settings .Atracurium infusion was started and stopped after 18 hours once Ppeak pressures reduced .Serial ABG were monitored alongwith P/F ratios and OI which were suggestive of mild to moderate ARDS . Serial X rays done showed persistent whiteout of right lung and left upper lobar consolidation . NAC nebulisations and chest physiotherapy started from today .Currently ventilator settings Fio2-60% , Peep -8 , TV110ml , rate 36 , Ppeaks 22. Dr Bharath Reddy's review was done who advised to add Methylprednisolone 10mg/kg for anti-inflammatory effect . Also to consider bronchoscopy when ventilatory support is minimal as there is persistent collapse / consolidation of right lung. Serial ABG done showed improvement in oxygenation . Ventilatory settings were reduced as tolerated . Chest x ray done on 3/10/2022 showed improvement. Cycling in ventilation was done between PRVC and CPAP mode which he tolerated well . Trial of spontaneous breathing was given which he tolerated well .

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1st extubation attempt - Child was extubated on 4/10/22 and was put on nasal prongs with 2 litres oxygen and monitored. Initially child maintained saturation of above 95% with no distress. ABG done showed normal PaO2 and Paco2. Within the next 24 hours he developed respiratory distress in form of tachypnea, bilateral subcostal retractions associated with desaturations. Chest X ray done was suggestive of right sided collapse/ consolidation. ABG done showed respiratory acidosis. Child was put on NIV and child was maintaining saturation of 95 but as child was not tolerating NIV, he was started on HHFNC (Fio2: 60/ Flow:30) and continued on NAC nebulisations with chest physiotherapy. Child was monitored for 24 hours. Respiratory distress improved and he was maintaining saturations between 88-90%..Methylprednisolone was reduced to 2mg/kg/day. Repeat chest xray had worsened which showed bilateral collapse/ consolidation. As distress worsened with saturations of 70% on HHFNC he reintubated and put on ventilator (Fio2:40/PEEP: 8/ Rate: 30/ TV: 100). Child had a fever spike with raised inflammatory markers. ET secretions was sent for culture which showed growth of Pseudomonas(MDR) in ET secretions hence antibiotics were escalated to Ceftazidime Avibactum and Aztreonam.

Dr Bharath Reddy (Paed Pulmonologist) opinion was taken, advised Bronchoscopy. Bronchoscopy done on 7/10/2022 showed secretions and lavage was done. BAL reports are awaited. BAL for CBNAAT and AFB is negative.
2nd extubation attempt - Mechanical ventilation gradually weaned and extubated on 10/10/2022. Chest X-ray on the morning of 10/10/2022 prior to extubation showed good lung expansion. Child was put on HHHFNC. Parents declined child to be started on NIV post extubation. ON HHFNC, child managed to maintain normal oxygen saturations for 6 hours, then gradually developed worsening respiratory distress and hence had to be reintubated.

CARDIOVASCULAR SYSTEM:
On admission child had eveidence of compensated shock . Child was intubated due to respiratory failure and unstable haemodynamics . Right radial arterial line and right IJV central line were secured .He was started on inotropes Adrenaline and Noradrenaline infusion (@ 0.2mcg/kg/min). ECHO done showed mild PAH . After ventilation haemodynamics gradually improved and inotropes were stopped over the next 6-8 hours . No further haemodynamic instability noted .

INFECTION :
On admission , he had evidence of severe pneumonia with ARDS . Initial investigations done showed high inflammatory markers such as TC-33920 , PLT-42,000 ,CRP- 65.3,PCT-36.45.He was started on IV meropenem , Vancomycin and Clindamycin . Blood , urine and ET cultures were sent and showed no growth, ET cultures awaited . Ferritin was done which was 2396.6.Serial CBC showed improving trends of platelets (48,000). CRP and PROCAL reduced to 41 and 29.4 respectively.
Serial CBC done showed persistent thrombocytopenia .Hence inflammatory markers were repeated which showed increase in TC to 21,000 and CRP to 133. Hence Colistin was added . Vancomycin and Clindamycin was stopped . In view of worsening distress and child requiring higher ventilation settings and ET secretion showing multidrug resistent pseudomonas, antibiotics were upgraded to Ceftazidime Avibactum and Aztreonam. AMR showing NDM.

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ACUTE LIVER FAILURE / ISCHAEMIC HEPATITIS:
On admission he had deranged liver functions (TB-2.4,SGOT-2460,SGPT-880,ALB-2.8), deranged coagulation (PT24.7,APTT-78,INR1.97).Ammonia was 65 . NAC infusion was started . Gradually liver functions improved . No evidence of bleeding .
Tb-2.6,SGOT-514,SGPT-406,ALB-2.7.
PT-22,APTT-39.7,INR-1.75.

ACUTE KIDNEY INJURY :
He had evidence of acute kidney injury in the outside hospital . Foley's catheter was inserted and urine output was monitored strictly. RFT showed improving trends . Frusemide infusion was started to facilitate diuresis .
Normal renal function at present with good urine output.

Currently :
Child is on SIMC PRVC +PS
Fio2-40%, PEEP -8, TV-100ml, Rate-30, Ppeak -20, Spo2 -96, ETCO2-32 to 35

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HR-108/MIN
BP-99/64MMHG
Adequate urine output, harm-dynamically stable. On NGT feeding. Oral sedation(Pedichloryl and Oral Lorazepam)

CURRENT MEDICATIONS

1. INJ CEFTAZIDIME AVIBACTUM - 750MG IV TID
2. INJ AZTREONAM 450 IV QID
3. INJ LIPOSOMAL AMPHOTRICIN B 45IV OD
4. SYP OMNOCORTIL 2.5MG PO BD

Current plan is to increase and optimise caloric intake. Continue cycling of mechanical ventilation with CPAP+PS.

Need for tracheostomy has been discussed with family in detail in view of second extubation failure. Long term need for mechanical ventilation. Need for neuromuscular disease evaluation is being considered.

This letter has been provided as per request of family.
Kindly do not hesitate to contact us, should you require further information.

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Doctor's Signature

Dr Nidhi S
KMC 100147

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