PEDIATRICS GAZETTE

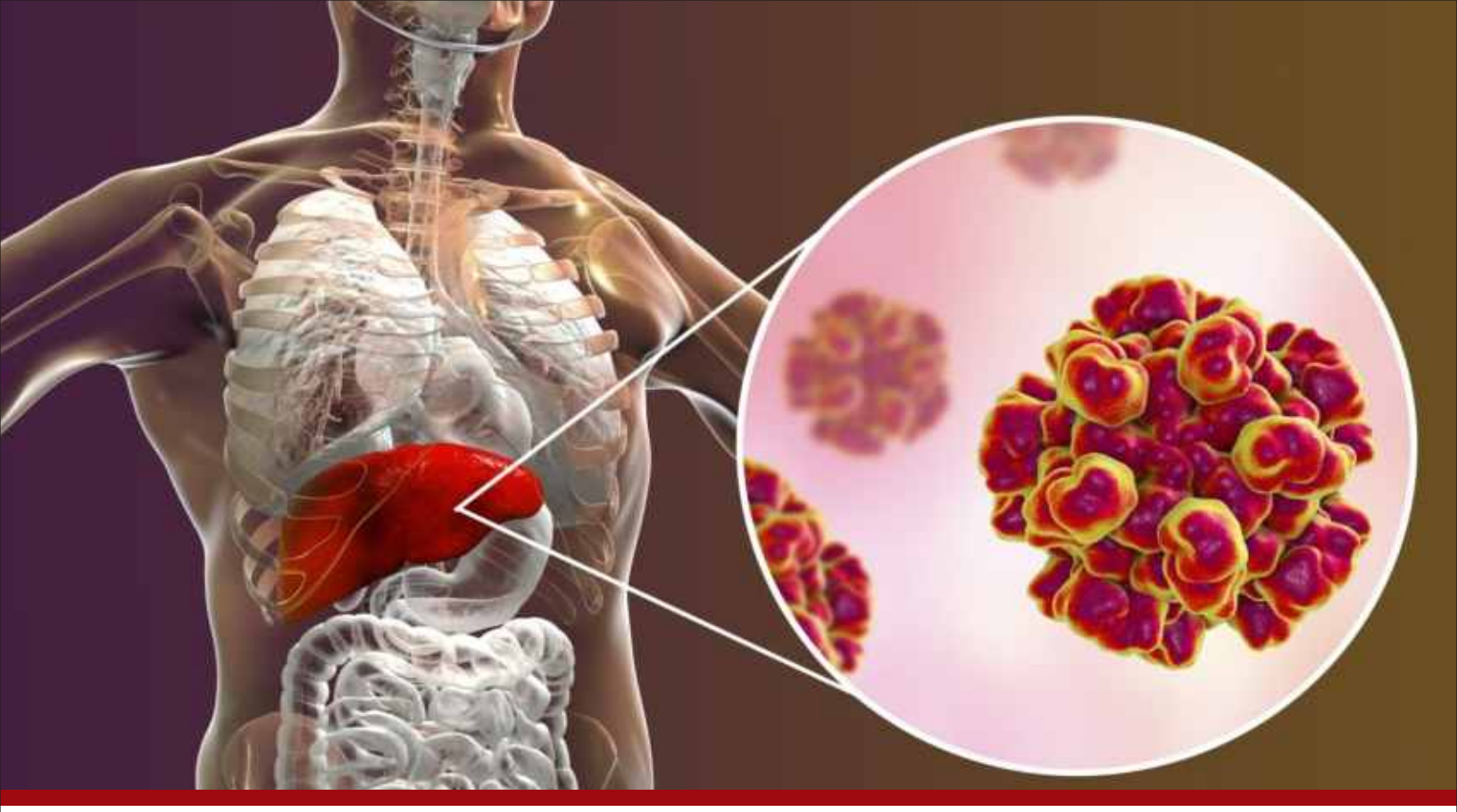
Department of Pediatric & Neonatology

July 2020

ITTEFAQ HOSPITAL

(TRUST) LAHORE

CONTENT



INTRODUCTION:

Acute viral hepatitis can be defined as inflammation of liver due to infection of any of the hepatotropic viruses. Hepatitis A and hepatitis E are found in communities where food and water contamination is higher and there is poor sanitation. Drinking boiled water washing hands before eating and avoiding food from outside can be a very effective means to prevent the spread of these viruses. Symptoms include jaundice, dark coloured urine, extreme fatigue, nausea, vomiting, anorexia and abdominal pain. The route of spread is feco-oral.

Hepatitis A is a small non enveloped single stranded RNA virus whereas hepatitis E is a positive sense single stranded RNA icosahedral virus with a 7.5kb genome.

The main aim of the study is to find out the frequency and distribution of hepatitis A and hepatitis E viruses based on age, gender, its association with typhoid fever and the drinking water source during a period of one year

MATERIALS AND METHODS:

This study was conducted in the Department of Paediatrics, Ittefaq Hospital Lahore. The data was retrieved from the medical records with approval of the hospital authorities.

The study aimed at the frequency and distribution of hepatitis A and hepatitis E viruses based on age, gender, its association with typhoid fever and the source of drinking water during a time period of one year from 1st June 2019 till 30th June 2020.

INCLUSION CRITERIA:

- Age groups between 0-12 years
- Patients admitted in hospital premises
- Patients with both anti HAV IgM and anti HEV IgM done alongwith typhidot IgM
- Patients with no other significant illness
- Patients not vaccinated for HAV before

EXCLUSION CRITERIA:

- Age group more than 12 years
- Patients treated conservatively on OPD basis
- Patients with other causes of acute viral hepatitis
- Patients without the report of typhidot IgM

RESULTS:

- Out of total 36 cases which were confirmed and labelled as either HAV or HEV after reports of IgM 24(66.66%) were males whereas 12 (33.33%)females.(table 1)
- Out of 36 patients 3 (8.33%) were below 5 years of age, 18 (50%) patients were in between 5-10 years of age whereas 15 (41.66%) patients were above 10 years(table 2). Hence the highest proportion was seen in between 5 to 10 years of age and male preponderance was observed in all age groups.
- The main cause of viral hepatitis was found to be HAV with total of 29 (80.55%) patients on the other hand only 6 (16.66%) patients had HEV & one (2.77%) patient had both HAV & HEV simultaneously (table 3).
- 33 (91.66%) patients had a negative report for typhidot IgM while 3 (8.33%) patients had a positive typhidot IgM (table 4).
- 25 (69.44%) patients were drinking filtered water as compared to 8(22.22%) drinking water from community supply. 3 (8.3%) were
- drinking mineral water and none of the patients was drinking boiled water (table 5).

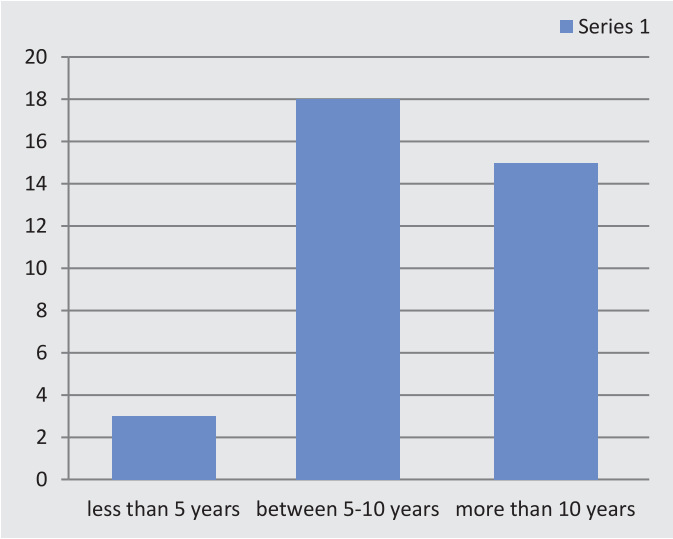


TABLE 1 SHOWING AGE DISTRIBUTION OF PATIENTS

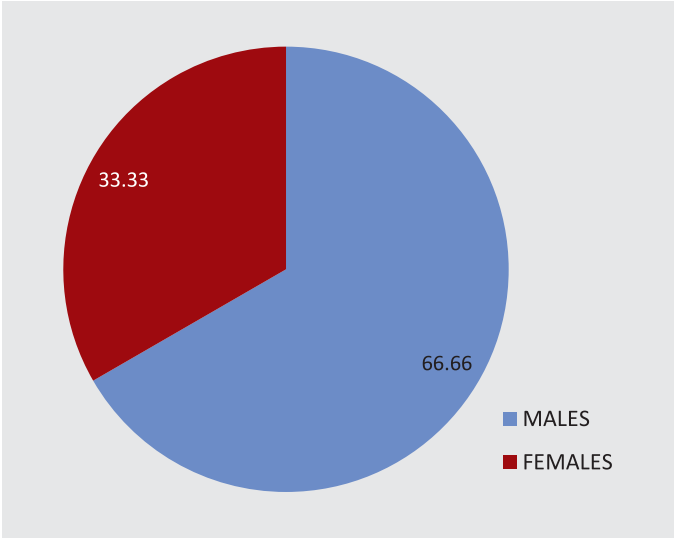


TABLE 2 SHOWING GENDER DISTRIBUTION OF PATIENTS

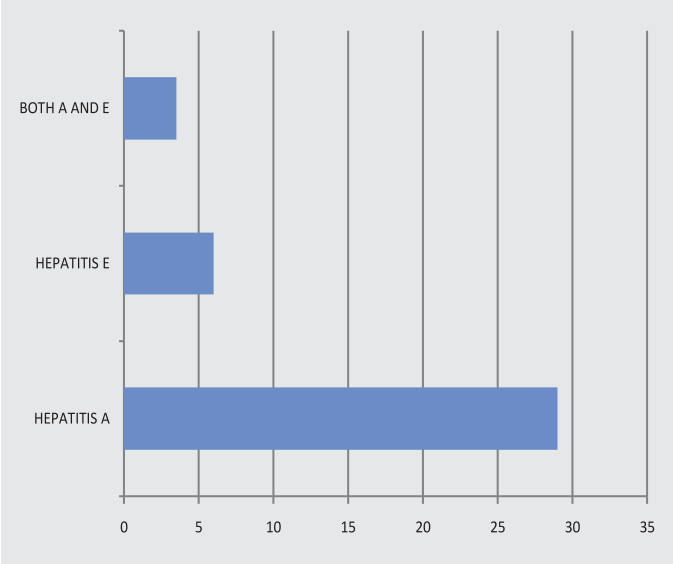


TABLE 3 SHOWING DISTRIBUTION OF PATIENTS ACCORDING TO THE TYPE OF VIRAL HEPATITIS

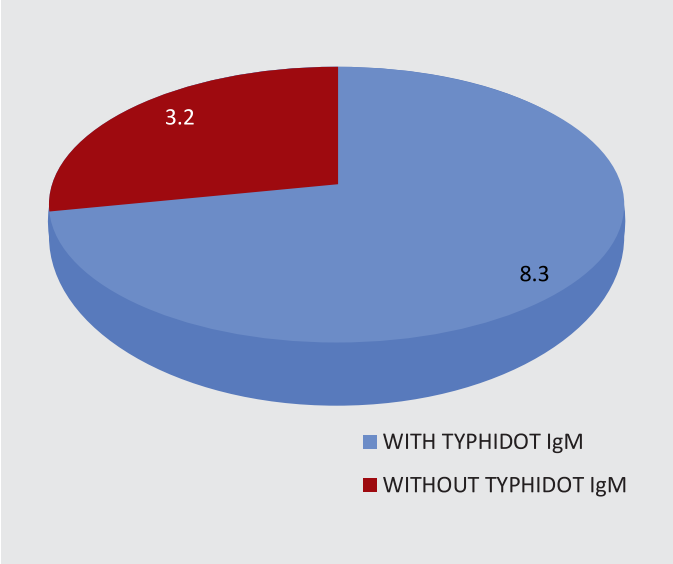


TABLE 4 SHOWING DISTRIBUTION OF PATIENTS OF ACUTE VIRAL HEPATITIS WITH & WITHOUT TYPHOID

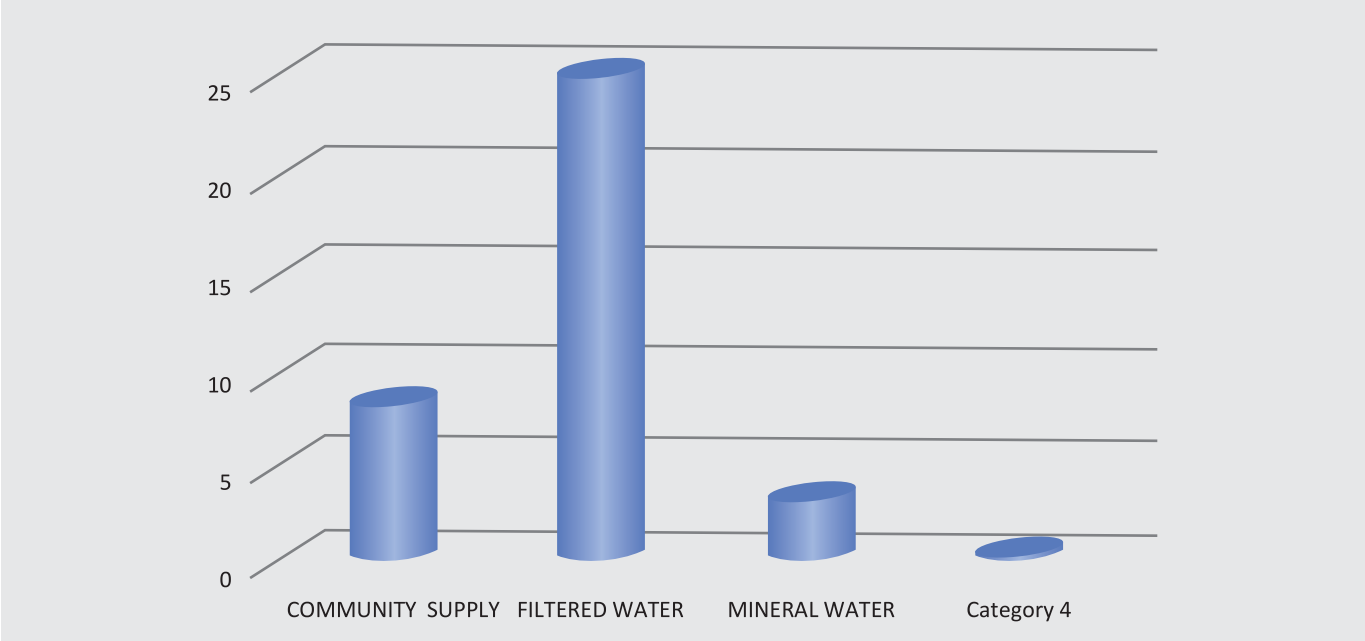


TABLE 5 SHOWING THE SOURCE OF DRINKING WATER IN PATIENTS

DISCUSSION:

Various studies from the Indian sub continent have shown high prevalence rates ranging from 31-67% for HAV and 16-66% for HEV in children. 1,2,3,4.

HAV infection is acquired in early life with various community based studies demonstrating the presence of anti HAV antibodies in nearly 80% of children by the age of 5 years.5,6.

In a study by Pandeya N.et al , coinfection was found in a 7 year old patient. However it was also reported that the prevalence of HAV was more in the age group 0-5 years whereas prevalence of HEV was seen more in the age group 16-20. 7.

In the present study 66.66% were males while 33.33% were females which was similar to study by Monica A. et al. 8.

Kumar et al, Podder et al and Arvind et al in their study have concluded that hepatitis due to co-existing HAV and HEV and other combinations did not result in a more severe illness when compared to hepatitis due to a monovirus infection. 9,10.

Transmission of the disease can be interrupted by proper food hygiene, improved sanitation and public education. 11.

HAV vaccine is protective but coverage is poor because of being available privately only and lack of awareness. None of the patients in the present study had received HAV vaccine.

The greatest limitation of the present study is its small sample size. Due to the outbreak of Covid 19, patient influx reduced and because of staying at home, food contamination minimized. Also the study population was hospitalized children in a tertiary care private hospital so the clinical profile may not be generalized to the community.

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CASE REPORT OF A 2 YEAR OLD CHILD WITH KEROSENE OIL POISONING

By Dr SHAH ALAM
FCPS 2 RESIDENT ITTEFAQ HOSPITAL

ABSTRACT:

Kerosene oil is the commonly ingested hydrocarbon under 5 years of age because of its easy accessibility and inappropriate storage. It is among the most toxic liquids because of its high volatility, low viscosity and low surface tension. Here we present case of a 2 years old boy who presented in ER with history of ingestion of mouthful of 2 sips of kerosene oil 3 hours ago which was followed by induction of vomiting and gastric lavage which was done at one of the tertiary care hospital which led to chemical pneumonitis and encephalitis, presented to us with respiratory distress and decrease level of consciousness, thus requiring PICU admission

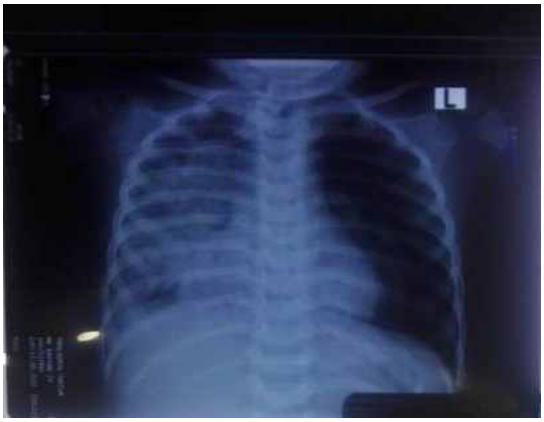
CASE PRESENTATION:

Patient presented to emergency with complaints of vomiting, shortness of breath and altered state of consciousness. He accidently took 2 sips of kerosene oil 3 hours back [which was placed behind sofa in a sprite bottle]. After that his father induced vomiting, 4 to 5 episodes not containing blood. Attendants took the patient to the nearby hospital where immediate first AID were given and clothes were removed. Patient was referred to children hospital, where gastric lavage was done. After lavage there was progressive decrease in conscious level and increase in distress. It was not associated with haemoptysis, abdominal distension, abdominal pain, malena cyanosis and seizures. They councelled the attendents that the patient may need ventilatory support. After that they reported Ittefaq Hospital.

At the time of presentation.A sick looking child with mild smell of kerosene oil lying on bed. He was tachypnoiec, has tachycardia and was Afebrile SPO2 was 79% without O2 and 95% with 2 litres of O2 via mask, BSR was 138 MG/DL on examination; CNS; GCS; 8/15, E1 M5 V2 Pupils were pinpoint and non responsive to light tone was normal and reflexes were intact Planters where down going.

On respiratory examination pt has subcostal recessions, nasal flaring and right sided crepts Abdomen was soft, non tender and non distended, bowel sounds were audible based on history and examination our first impression was Kerosene Oil Poisoning causing Chemical Pneumonitis/Chemical Hypoxic Brain Insult/Encephalitis. Patient was admitted in PICU of Ittefaq Hospital, NG passed, Oxygen support given, I/V line maintained and kept NPO. Parents were councelled that patient may need ventilatory support in LABS patient's CBC, Serum Electrolytes Liver function tests, Renal function tests and ECG were normal PCR COVID 19 was negative.

ABGS SHOWED MILD TO MODERATE HYPOXEMIA. CHEST X-RAY SHOWED DIFFUSE RIGHT SIDED INFILTRATES



PICTURE 1 CXR.

FIGURE 2 CHEST X RAY AFTER RECOVERY

We started inj ceftriaxone, inj metronidazole, inj vancomycin, inj dexamethasone, inj omeprazole, inj manitol [for 2 days] nebulised the patient with bronchodilators and inhaled corticosteroids and 70% I/V fluids were given. Neurologist opinion taken his remarks are GCS 8/15,pupils are pinpoint. He made the diagnosis of hypoxic brain insult due to prolonged ischemia of brain due to chemical pneumonitis. He advised to get MRI brain and eeg (which were not done due to non-afforadability) and to continue the therapy already started. Patients conscious level and distress improved with time and patient was oxygen free and oral free on 3rd day of admission.

DISCUSSION:

Hydrocarbons are amongst most commonly ingested poison under 5 years of age. It is because of its easy accessibility and inappropriate storage. Kerosene oil is one of the lethal hydrocarbons this is because it has low viscosity and high volatility due to which it has high aspirational potential and deep penetration into tracheobronchial tree displaces the alveolar gas and interfere with the ventilation and causes cns depression. It inhibits the type 2 alveolar pneumocytes thus decreasing the surfactant formation. Low surface tension enhances its spread on lung tissue. That's why even 1 ml of it can cause significant damage. Pulmonary toxicity occurs due to poor GI absorption and aspiration. Fatal chemical pneumonitis can occur. CNS toxicity results because of its high lipid solubility and secondarily due to hypoxia. Cardiac dysarrythmias can occur because it make the cardiac muscle membrane more sensitize to body catecholamines. gastrointestinal symptoms such as nausea, vomiting, abdominal pain can occur. local irritation and chemical burns of mucosa occur. In our pt respiratory and CNS symptoms aggravated because of vomiting [induced by attendants] and gastric lavage. Both these events encouraged its spread and fatal pulmonary injury and CNS hypoxia. CXR should be done 4, 6 hours after ingestion or earlier if distress develop. Serial ABGs should be done. ECG should be done to see any dysarrythmias. Treatment of kerosene oil poisoning is mainly supportive with supplemental oxygen, bronchodilators. steroids may help to avoid the development of fibrosis and improve lung function, but evidence is limited. antibiotics can be given in super imposed infections. In severe cases Extra corporeal membrane oxygenation and High frequency ventilation, Surfactant administration and Mechanical ventilation are helpful.

CONCLUSION:

The main stay of treatment in kerosene oil poisoning is supportive with, supplemental oxygen, bronchodilators and steroids. Antibiotics should be given in superimposed infections. ECMO, HFV, Surfactant and Mechanical Ventilation should be considered in severe cases. Strict monitoring of the pt's heart rhythm, distress and conscious level should be done. Induced vomiting and gastric lavage are contraindicated. Most cases recover by supportive therapy. Parents must be councelled that kerosene oil should not be in reach of children and it should not be placed in attractive bottles

4.5 MONTHS OLD GIRL WITH RECURRENT ADMISSIONS WITH PNEUMONIA & COUGHING UP OF FRANK FRESH BLOOD FROM MOUTH & NOSE

By Dr RIFFAT KHAN
FCPS 2 RESIDENT AT ITTEFAQ HOSPITAL LAHORE

ABSTRACT:

4.5months old patient was admitted with pneumonia and she was also coughing up fresh blood with every bout of cough. She was investigated thoroughly for any abnormal communiation between lungs and gastroesphageal tract. But only positive finding was consolidation In right lung

CASE PRESENTATION:

Our patient had cough from 1month, cough was mild to moderate in intensity, occurred in bouts and was associated with flu and disturbed sleep. From 15 days these bouts were off and on accompniedby coughingup of dark coloured blood. Which was small in quantity and often chocolate coloured but from 1 day there was spitting up of significant quantity of fresh red coloured blood with every bout of cough which and was associated with black colour stools as well. There was complaint of fever and breathing difficulty from 1 day before admission. Fever was low grade undocumented and relieved with antipyretics.

PICTURE OF TISSUE STAINED WITH PATIENT'S COUGHED UP BLOOD

Patient was Born thorough cesarean at full term at Ittefaq hospital and was operated on 2nd of life for esophageal duplication cyst. For which Right Thoracotomy and Esophagectomy was done. Echocardiography was also done after birth which showed moderate sized PDA with PPHN.
Repeated Echocardiography showed closed PDA. There was also history of 2 previous admissions in ittefaq hospital with bronchopneumonia at the age of 1 and 3 months respectively. Patient was getting Vaccinated according to EPI, was developmentally normal and was product of consangious marriage.
On examination: Patient was pale, had severe respiratory distress with RR of 65/min, subcostaland intercostal recessions were also present. chest had bilateral crepitation, but other examination was normal.
Treatment of pneumonia and GERD was started and tracheoesophageol fistula was also kept in differentials. Initial investigations results had, Hb of 6.7, leukocytosis with tlc of 24.5 and with neutrophils 48 and lymphocytes 42, thrombocytosis was present with platlets of 702, Acute phase reactivity was also raised with CRP of 37.9 and ESR of 71. Coagulation profile, ABGS, stool for occult blood, blood culture and USG abdomen were all normal.
In Chest xray there was post operative, retrosternal and posterior mediastinal fibrosis and homogenous consolidation in upper and lower right lung zone was appreciated. Hemi-vertebra was present in mid thoracic region resulting in Scoliosis of spine with concavity towards right side, along with this there was fusion of the right 6th and 7th thoracic rib.
Paeds surgeon, ENT specialist and gasroentrologistopnion was also asked they advised to get CT chest and barium swallow to rule out any communication between GIT and lungs. Patient was also reviewed by cardiologist but had no cardiac issue.

X RAY CHEST OF PATIENT

CT SCAN OF CHEST

CT chest was suggestive of lung consolidation and no evidence of leak was found between lungs and gut. Dense air space consolidation involving posterior segment of right upper and apical segment of ipsilateral lower lung lobe was seen, showing internal bronchogram and small cavity formation, suggestive of lower respiratory tract infection was present. Scoliosis of dorsal spine and fusion anomaly of upper dorsal spine and Hemivertebra were also present.

Patient was discharged after 8 days, as she was stable, during hospital stay she was treated for pneumonia, GERD and Anemia, oxygen inhalation for 1 day, Antibiotics Inj. ceftriaxone and oral Clarithromycin for given 7 days were given, Nebulization with atem, 3% saline, and muculator was also given. Inj Risek for 7 days given and 1 PCV transfusion was also done. Endoscopy, bronchoscopy and CT angiography were kept in plan.

But Patient with in 15 days had similar episode of coughing up of blood. In next 2 months she had 2 more admissions with similar complains, in 2 different hospitals where she was treated for pneumonia and one time fungal infection was also treated and she alsounder went other investigations also to look for cause of coughing of blood. Endoscopy Which showed normal esophageal, gastric mucosa and duodenal mucosa and no evidence of TEF. Barium swallow was also but report was normal. CT Chest was again repeated in another hospital but it only showed subsegmental consolidation in right lower lobe with minimal right pleural effusion. Congenital vertebral anamolies in thoracic spine leading to scoliosos. CT chest Angiography was also done, which showed mixed density 20 – 60 HU in right posterior mediastinum indicating fluid/hematoma possibility. There was asymmetrical contrast density in right and left common carotids, external carotids and its branches, being less on left side. No acute extravasation of contrast noted. No aneurysmal dilatation/vascular malformation noted. PNS, nasal cavity, nasophyarynx and parapharyngeal spaces were all normal. Bronchoscopy was also done and it was normal.

CONCLUSION:

Patient was thoroughly worked up for coughing up of fresh blood through mouth and nose but no finding other than consolidation was found.Thus it was concluded that it was may be lung consolidation that was causing such bleeding. To my knowledge it was 1st case with such presentation.

COMPARISON OF EFFECTS OF INJECTION MEROPENEM AND AZITHROMYCIN IN XDR ENTERIC FEVER

By Dr TAYYABA
FCPS 1 YEAR RESIDENT

OBJECTIVES:

Response of injection meropenem and azithromycin in:

- intensity and frequency of fever spikes
- total stay in hospital
- 1st afebrile day

MATERIAL AND METHODS:

- Study design: Randomized controlled comparative study (Prospective study)
- Setting: Department of Paediatrics, Ittefaq hospital Lahore
- Study duration: 1st Sep. 2019 to 30th June 2020
- Sample size: A total of 30 children with XDR enteric fever were included and were divided in two groups;
- Group A received injection meropenem,
- Group B received injection azithromycin

INCLUSION CRITERIA:

- Age 6 months to 12 years
- Both male and females
- Inpatient

EXCLUSION CRITERIA:

- Outpatient
- simple enteric fever and MDR enteric fever

DATA COLLECTION:

The study was started after taking informed consent from parent, patient meeting inclusion criteria were included. Demographic information like (age, gender) and clinical details were obtained. All cases were treated with standard protocol. All data was collected by me on attached performa.

STUDY PERFORMA OF COMPARATIVE STUDY OF INJECTION MERONEM VERSES INJECTION AZITHROMYCIN

Patient Name: _____
Father's Name: _____
Age: _____
Sex: _____
Address: _____
Contact Number: _____
MRN: _____
DOA: _____
DOD: _____

Study groups: Group A includes those cases who receive injection Meronem and Group B includes those cases who receive injection Azithromyein

Name of Medicine	Time of starting Medicine	Hospital Stay	Response Time	
			Decrease intensity & Frequency	Afcbrilc

DATA ANALYSIS PROCEDURE:

Data was entered and analyzed in SPSS 22 version. Results were as followed

INJ. MEROPENEM RESULTS

HOSPITAL STAY DAYS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	5.0	5.0	5.0
	6	4	20.0	20.0	25.0
	9	11	55.0	55.0	80.0
	14	4	20.0	20.0	100.0
	Total	20	100.0	100.0	

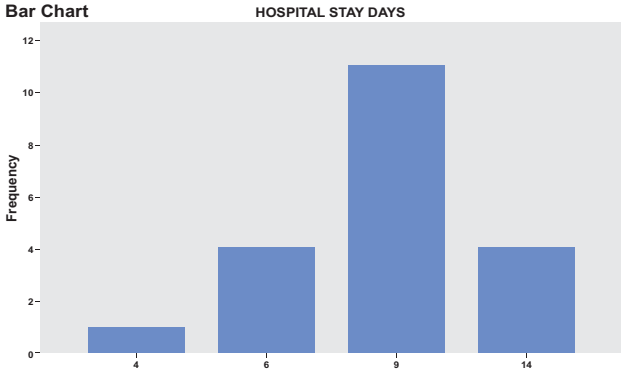
FIRST AFEBRILE DAY

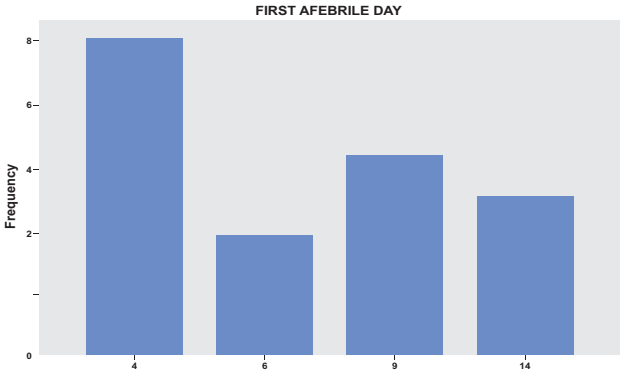
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	8	40.0	40.0	40.0
	6	3	15.0	15.0	55.0
	7	5	25.0	25.0	80.0
	8	4	20.0	20.0	100.0
	Total	20	100.0	100.0	

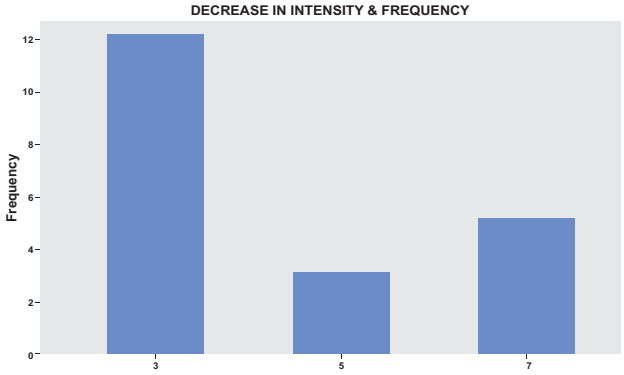
DECREASE IN INTENSITY AND FREQUENCY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	12	60.0	60.0	60.0
	5	3	15.0	15.0	75.0
	7	5	25.0	25.0	100.0
	Total	20	100.0	100.0	

Bar Chart







INJ. AZITHROMYCIN RESULTS

HOSPITAL STAY DAYS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	1	5.0	10.0	10.0
	6	4	20.0	40.0	40.0
	7	1	5.0	10.0	10.0
	8	2	10.0	20.0	20.0
	9	2	10.0	20.0	20.0
	Total	10	50.0	100.0	100.0
Missing	System	10	50.0		
Total		20	100.0		

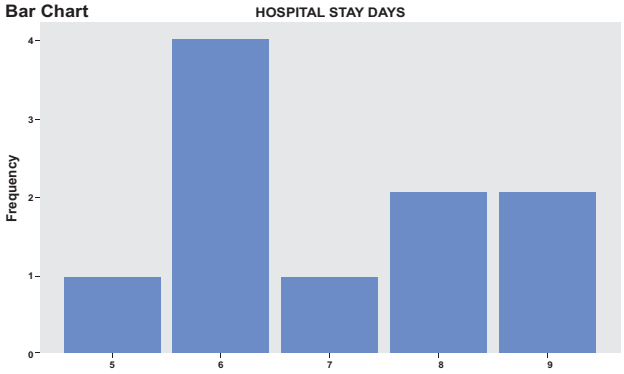
FIRST AFEBRILE DAY

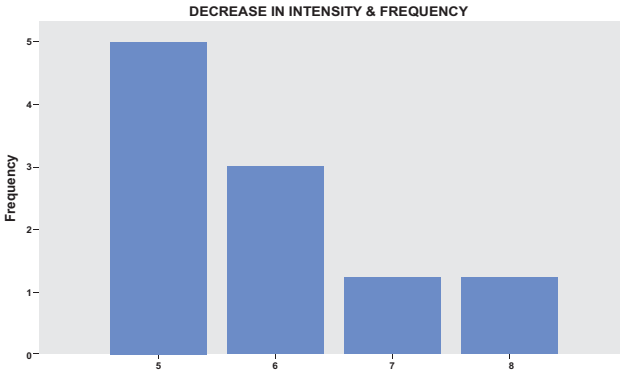
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	5	25.0	50.0	50.0
	6	3	16.0	30.0	80.0
	7	2	10.0	20.0	100.0
	Total	10	50.0	100.0	
Missing	System	10	50.0		
Total		20	100.0		

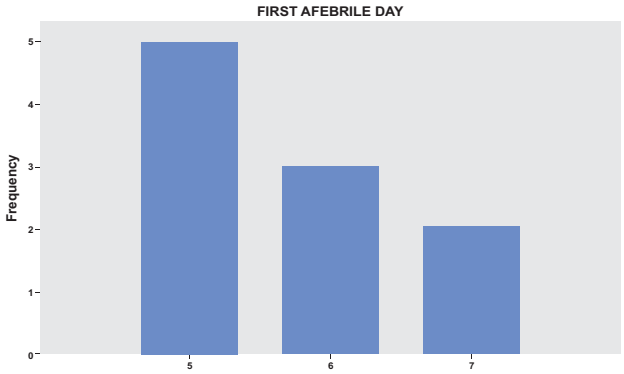
DECREASE IN INTENSITY AND FREQUENCY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	5	25.0	50.0	50.0
	4	3	15.0	30.0	80.0
	5	1	5.0	10.0	90.0
	6	1	5.0	10.0	100.0
	Total	10	50.0	100.0	
Missing	System	10	50.0		
Total		20	100.0		

Bar Chart







	Inj. meropenem	Inj. azithromycin
Hospital stay	Minimum 4 days (5%) Maximum 14 days (20%)	Minimum 5 days (10%) Maximum 9 day (20%)
Decrease in intensity and frequency of fever	3rd -4th day (60%)	3rd – 4th day (80%)
1st afebrile day		5th day in 50% cases

CASE REPORT OF A 4 YEAR OLD CHILD WITH ANTI MOG SYNDROME PRESENTED AS ADEMS

By Dr NAIHA SAGHEER
FCPS 2 RESIDENT, PEDIATRIC MEDICINE DEPARTMENT

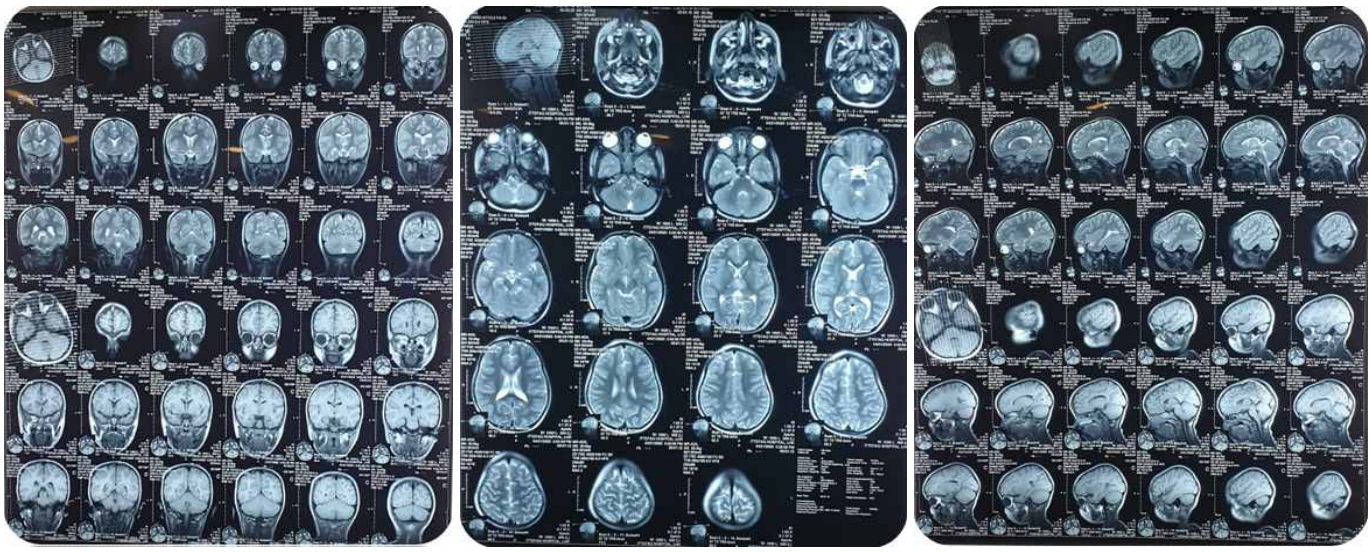
ABSTRACT:

Myelin oligodendrocyte glycoprotein (MOG) is a candidate target antigen in demyelinating central nervous system diseases, including acute disseminated encephalomyelitis (ADEM), neuromyelitis optica and multiple sclerosis. MOG antibodies have been shown to be positive in high titers during the first episode of ADEM with rapidly decreasing to undetectable limit after recovery. Here we present a case of 4 year old boy who presented with complains of unable to bear weight on lower limbs, irritability and altered mental status. MRI brain showed demyelinating lesions and his anti MOG antibodies came out to be positive. Steroids and azathioprine given patient recovered and being discharge on close follow up as there are chances of relapse.

CASE PRESENTATION:

A four years old male child presented to emergency with complains of unable to bear weight on lower limbs, irritability, walking difficulty for last 2 days and altered mental status for last 1 day. Parents took child to tertiary care hospital where he remained for 1 day. Lumber puncture was refused by the parents and patient was treated on line of meningoencephalitis. On the next day they left the hospital against medical advice and reported to our emergency we admitted the patient in picupast medical history was not significant except alternate exotropia since child hood. On examination; patient was vitally stable, altered mental status+, deep tendon reflexes were 3+, planters bilateral up going, tone was normal, ataxia ++Treatment on line of meningoencephalitis was started. lumber puncture was done which came out normal. Base line investigations done which revealed iron deficiency anemia otherwise there were no significant findings. We consulted neurophysician he gave the differentials of sol, ADEM and metabolic disorders. So he advised metabolic workup and MRI brain (plain+contrast). metabolic workup came out normal.

MRI BRAIN WAS POSITIVE FOR DEMYLINATING LESIONS.



We started pulse therapy of prednisolone 30mg/kg for 5 days and then put him on oral steroids. In a meanwhile we sent ANTI AQUAPORIN 4 ANTIBODIES and ANTI MOG ANTIBODIES. Anti MOG antibodies came out positive and anti-aquaporin 4 antibodies were negative. Fundoscopy was done twice which was normal, no optic neuritis. MRI SPINE was not done. so along with steroids, azathioprine, potassium and stomach protection was given. Patient improved started walking and being discharged on close follow up. Now patient is on regular follow up and completely recovered with no relapse yet.

CONCLUSION:

Testing for anti MOG ANTIBODIES in a patient with meningoencephalitis and with the history of demyelinating symptoms is warranted. Steroids and azathioprine have good effects. Close follow up is needed as there is chance of relapse.

ABBREVATIONS:

MOG: myelin oligodendrocyte glycoprotein
CSF: cerebrospinal fluid
MRI: magnetic resonance imaging
SOL: space occupying lesion
ADEM: Acute disseminated encephalomyelitis
PICU: pediatric intensive care unit

MOMENTS OF PRIDE






ITTEFAQ HOSPITAL

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