Case study

Case Report on Hemolytic Uremic Syndrome

ABSTRACT:-

Introduction

[1]Hemolytic uremic syndrome (HUS) is a kidney disease characterized by damaged and inflamed small blood vessels. As a result of the damage, clots in the vessels may form. Clots impede the filtration function of the kidneys, causing renal failure, which can be deadly. Haemolytic–The uremic syndrome is defined low platelets, acute renal failure, and low red blood cells (HUS). 1 Bloody diarrhea, fever, vomiting, and weakness are common early symptoms. 2 As the diarrhea progresses, kidney issues and low platelets become more prevalent. 3 Adults may have worse outcomes than children, despite the fact that children are more typically affected. Neurologic complications are possible. O157:H7.4 is a E. coli is a type of bacteria. Salmonella, Shigella, and S. pneumoniae and certain medications are among the other causes. The bacteria's synthesis of Shiga toxin is usually the underlying pathology. Haemolytic anaemia and thrombocytopenia were the key symptoms of this case report with renal involvement being less relevant.

Clinical Finding: Hemolytic anemia, nephropathy and thrombocytopenia, pallor, jaundice, edema, hypertension. **Diagnostic Evaluation:** HB-5.7%, total protein-7.4, total Alp-123 , total platelet count-16000lac, total bilirubin-3.2 mg/dl, WBC 7000, CRP 5.58MG/L, Sodium level 136mg/dl, potassium level 3.92mg/dl, **Therapeutic Intervention –** Tab Amlodepin 10 mg BD , Tab Prednisolone 10mg TDS , Tab Envas 2.5mg OD , Inj.Metropenum 340mg BD ,Inj. Pantop 20mg OD. **Outcome-**The medication has started for thrombocytopenia, the patient is on dialysis and If is given to patient for movement of body because of patient is obese.

Conclusion -The patient is admitted in AVBRH under the Dialysis department with continuous medical, nursing management and currently the patient's condition is stable and under observation.

Keywords- Hemolytic uremic syndrome, Haemolytic Anaemia, Ureamia, thrombocytopenia, Acute Kidney Failure, Escherichia coli 0157:H7.

Introduction

Bloody diarrhoea, fever, vomiting, and weakness are common early symptoms.(1) As the diarrhoea progresses, kidney issues and low platelets become more prevalent. Adults may have worse outcomes than children, despite the fact that children are more typically affected.(2) Neurologic complications are possible.O157:H7.4 is a E. coli is a type of

Comment [ON1]: The Abstract introduction should serve as a background statement and it should be short and precise.
Some of these statements should go to the main introduction.
There are so many grammatical errors.
The sentences are incomprehensive- too many incomplete sentences.

Comment [ON2]: HUS is defined by low platelets, acute renal failure and low red blood cells

Comment [ON3]: It presents clinically with: 1. Bloody diarrhoea, fever, vomiting and weakness. 2. As the diarrhoea progresses, kidney failure and low platelets become more prevalent. 3. Adults may have worse outcomes than children, despite the fact that children are more typically affected.

Comment [ON4]: The causative agents to HUS include E. coli (0157:H7 variant), Salmonella, Shigella, S. pneumonia and certain medications.

Comment [ON5]: The clinical history of the case was not captured here. Could you please define your patient?
You cannot skip the history of your patient and delve into diagnostic evaluation.
If he was hypertensive, what was the Blood Pressure?
So many abbreviations/Units here are not conventional. Use Standard Units and abbreviations. Otherwise write the full meanings before using abbreviations.
What was the value of Urea in this patient?

Comment [ON6]: HB is not expressed in % rather g/dL or g%

Comment [ON7]: You don't use abbreviations here

Comment [ON8]: Review your conclusion with correct grammar.

Comment [ON9]: Review your keywords and include only the commonly used medical terms in your report.
Consider these Keywords: HUS, Thrombocytopenia, Ureamia, Acute Kidney Failure, E. coli 0157:H7 variant

Comment [ON10]: Check Comment ON1 above and apply accordingly.
Move similar statements above in abstract introduction down to the main introduction and effect the corrections made earlier.
The in-text citation must conform with the standard used by the journal.

bacteria. (3)Salmonella, Shigella, and S. pneumoniae and certain medications are among the other causes. The bacteria's synthesis of Shiga toxin is usually the underlying mechanism.(4)

It manifests itself in a distinctive manner. Thrombotic microangiopathy is a condition that results in inflammation and blood clots in the small blood vessels. (5)Cause: HUS is caused by eating bacteria that generate Shiga toxin, such as enterohemorrhagic Escherichia coli (EHEC), the most frequent of which being E. coli O157:H.(6) STEC- a frequent strain serotype that is not typical: Complete text of the article: Atypical Hemolytic uremic syndrome (HUS) is a kind of hemolytic uremic disease that affects the kidneys.(7)

Symptoms and Indications: The initial signs of illness might emerge anywhere from 1 to 10 days after eating infected food, although they usually appear 3 to 4 days after that. (8)Bloody diarrhoea, stomach pains, a mild fever, or dehydration from vomiting are some of the early signs and symptoms. HUS generally shows 5–10 days after the first symptoms, although it might take up to a month.(9)

The diarrhoea is gradually improving reduced lethargy Reduced urine output, blood in the urine, and renal failure are all indications and markers of kidney failure. For example, reduced platelets (which are required for blood coagulation) and red blood cell disintegration (microangiopathic hemolytic anemia). Jaundice (a yellow tint to the complexion) causes seizures, elevated blood pressure, and skin bleeding.(10)There are noticeable neurologic abnormalities in certain situations.

Clinical Historical

A 6-year-old female patient was hospitalized to AVBRH in February 2021 with pallor, edema, hypertension, nausea, and vomiting, and her relative stated that she was unable to walk due to obesity. Hemolytic uremic syndrome was the subject of some inquiry.

Family history: There are four member in the family. My patient was diagnosed to hemolytic uremic syndrome. all other member were not having complaint with health except for my patient who was admitted in the hospital.

Past history: There is no significant past history of the patient.

Clinical finding: Hemolytic anemia, nephropathy, thrombocytopenia, pallor, edema, hypertension.

Etiology:.

The most common cause of hemolytic uremic syndrome in children is an infection of the digestive system with Escherichia coli (E. coli).The gastrointestinal tract, often known as the GI tract, is a series of tubes that runs through the digestive system consists of hollow organs connected in a long, twisting tube from the mouth to the anus—along with other organs that help in food digestion and absorption. E. coli strains are typically harmless are common in the intestines and play an important role in digesting. If a child is infected, however, the

Comment [ON11]:
Expunge and start statement with:
HUS is caused by …

Comment [ON12]:
Incomprehensible statement- expunge.

Comment [ON13]:
Expunge symptoms and indications

Comment [ON14]:
Rephrase this statement for easy readability and meaning.

Comment [ON15]:
Correction:
In HUS, there is reduced platelet count(i.e., the blood component required for blood coagulation) and red blood cell haemolysis (destruction of red blood cells occasioned by microangiopathic haemolytic anaemia).

Comment [ON16]:
Expunge

Comment [ON17]:
She has 3 siblings and there was no family history of similar illness.

Comment [ON18]:
Past medical history was not significant.

Comment [ON19]:
Clinical Findings include: haemolytic anaemia, nephropathy, thrombocytopenia…

germs will become lodged in the digestive tract. Toxins are produced, which can enter the circulation. Toxins pass through the circulation and have the potential to kill red blood cells. E.coli O157:H7 can be found in raw, unpasteurized ground beef, unwashed milk, and infected raw fruits and vegetables, polluted juice, contaminated lakes or swimming pools Atypical hemolytic uremic syphilis

On physical examination of the patient, there was abdominal pain, edema, and un-co-ordinated movement.

Laboratory assessment revealed HB-5.7%, total protein-7.4, total Alp-123, total platelet count-16000lac, total bilirubin-3.2 mg/dl.

Therapeutic Interventions were Per oral Amlodipin 10 mg BD, per oral Prednisolone 10mg TDS, per oral Envas 2.5mg OD, parenteral Metropenum 340mg BD and parenteral Pantop 20mg OD.

Outcome-The medication was started for thrombocytopenia, the patient is on dialysis and physiotherapy is given to patient for movement of body because of patient is obese.

Discussion

On February 20, 2021, a 6-year-old girl patient was brought to the AVBRH dialysis centre with complaints of pallor, jaundice, edema, hypertension fever, vomiting and weakness. Kidney problem may develop when the diarrhoeal disease progresses in HUS. Despite the fact that children are more commonly affected, adults may have poorer results than children. Two other possible consequences of HUS include neurological problems and cardiac failure. (11)The majority of cases are caused by the infectious diarrhoea-causing E. coli strain O157:H7.4, S. pneumoniae, Shigella, Salmonella, and certain medications.(12) When a Shiga toxin-producing bacteria is found, it is called a Shiga toxin-producing bacterium. A genetic mutation causes atypical hemolytic uremic syndrome (aHUS), which can manifest itself in many ways. 5 A disease known as thrombotic microangiopathy occurs when tiny blood arteries become irritated and blocked with blood clots. It might take anywhere from one to 10 days, although it generally happens within three to four days. Dehydration and reduced urine output owing to diarrhoea are the early signs.(13)

Conclusion -The patient is admitted in AVBRH under the Dialysis department with continuous medical, nursing management and currently the patient's condition is stable and under observation.

References

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Comment [ON20]: ???

Comment [ON21]: What is Alp?

Comment [ON22]: What is 160001ac?

Comment [ON23]:
Expunge this statement because of the several repetition.
The discussion should discuss the results in a contextual manner.
You can start your discussion by stating:
Kidney problem may develop when diarrhoeal disease progresses in HUS. …
Fine-tune this discussion.

Comment [ON24]:
Rephrase this conclusion and make it more scientific. For instance>
Physicians should exercise a high index of suspicion of HUS when patient presents with sudden fever, diarrhoeal disease and vomiting.

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4. Antimicrobial Resistance and Virulence: a Successful or Deleterious Association in the Bacterial World? [Internet]. [cited 2021 Nov 26]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3623377/

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