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IP Journal of Paediatrics and Nursing Science

Journal homepage: <https://www.jpns.in/>

Case Report

Navigating the complexities: A case study on chronic liver disease

Mohsina Aalia Mushtaq^{1*}

¹Dept. of Nursing, Intern Skims Medical College, Islamic University of Science & Technology, Awantipora, Jammu and Kashmir, India



ARTICLE INFO

Article history:

Received 20-05-2024

Accepted 05-06-2024

Available online 18-06-2024

Keywords:

Chronic liver disease

Pathophysiology

Clinical manifestations

ABSTRACT

With its wide range of clinical signs and etiology, chronic liver disease (CLD) is a major global health concern. This abstract explores a thorough case study of a patient with a CLD diagnosis. We investigate the complex interactions between variables that affect the onset, course, and treatment of CLD using a multidisciplinary approach. The case study emphasizes how crucial customized treatment plans, risk factor reduction, and early discovery are to improving patient outcomes. We also address the role that medication, liver transplantation, and lifestyle changes have in managing chronic liver disease. In the end, we hope to promote a greater knowledge of this difficult medical illness by shedding light on the complexity of CLD through this case study and offering insightful information about its pathogenesis, clinical course, and therapeutic approaches.

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1. Objectives

1.1. General objective

1. To collect baseline information from the client
2. To be able to come up with as understanding of the disease process and formulate a comprehensive Nursing core plan using the specific objective of Nursing process.¹⁻⁸

1.2. Specific objective

1. To review the Physiology of the Disease
2. To understand the path physiology of the disease.
3. To know the medical treatment such as medications and laboratory works involved.
4. To know the Nursing Management for the Disease.
5. To practice nursing assessment during data gathering.
6. To prioritize identified health problems of the patient.

2. Introduction

1. Biographic information (Table 1)

3. Present Chief Complainant (Reason for Hospitalization)

70 Years old female with type 02 Diabetes Miletus (T2DM) had experienced pain in Abdomen with slight fever.

3.1. History of present illness

The patient was in her usual state of health when one day she suddenly felt pain in Abdomen of mild intensity with dull aching radiating to back with no aggravating as relieving factors. The patient also had experienced 3-4 episodes of loose stool as 02 episodes of black tarry stools.⁹⁻¹³

* Corresponding author.

E-mail address: mohsinaaalia@gmail.com (M. A. Mushtaq).

Table 1: Biographic information

Name	XYZ
Age	70 years
Sex	Female
Religion	Islam
Education	Nil
Occupation	Housewife
Date of Admission	20-04-2022
Time of Admission	10:14:58 Am
Diagnosis	Chronic Liver Disease
Word	3A (Gastroenterology)
Address	XXX
Marital Status	Married
Information	Daughter in law
Date of Discharge	28-04-2022
MRD No	1284759
Bed No	02
Patient type	Emergency

3.2. History of past illness

1. Medical History: The 70 years old is suffering from type 2 Diabetes Mellitus (T2 DM)
2. Surgical history: Not any

3.3. Developmental history

1. Neonatal
 - (a) Birth Weight: Normal
 - (b) Birth condition: Stable
2. Toddler
 - (a) Development: Good
3. Childhood
 - (a) Growth: Normal
 - (b) Condition: Stable – No Disease Present
4. Adolescence
 - (a) Growth /Nutritional needs: Good /fulfilled
 - (b) Diseased condition: - No Disease Condition found
5. Adulthood: T2DM

3.4. Details of immunization

1. Immunization: Details not Available
2. Vaccinated for Covid-19

3.5. Family of any illness

1. The clients both sons have a history of cholelithiasis.

3.6. Socio- economic status

1. Marital Status: Married
2. No. of children: 02 (Sons)

3. Total monthly income: 4000-5000/per month
4. Housing condition: Pacca House
5. Electricity Facility: Available

3.7. Personal history

1. Diet: Mixed
2. Hygiene: Satisfactory
3. Lifestyle: No Significant

3.8. Environmental history

1. Drinking water supply: Tap water
2. Environmental Sanitation: Acceptable
3. Waste /excreta disposal: Dumping
4. Presence of flies/ mosquitoes /rodents: No

3.9. Psychosocial history

1. Language: Kashmiri
2. Relationship with family members: Good
3. Social Support: Available

4. Physical examination

General behavior and appearance:

Orientation: Altered sensorium

Irrelevant Taking

Dress/ Grooming: Satisfactory, appropriate to the climate

Posture/Gait: Lone tone, relevant taking

Activity level Nil

Rapport: - _____

4.1. Anthropometry

1. Height: 5' 4"
2. Weight: 70 kg

4.2. Head to be examination**1. Head**

- (a) Position: Normal
- (b) Size: Normal
- (c) Symmetry: Symmetrical

2. Hair as scalp

- (a) Quantity: Thin
- (b) Dandruff: Absent
- (c) Lesion on Scalp: Absent

3. Face

- (a) Shape: Round
- (b) Symmetry: Symmetrical
- (c) Involuntary movement: Absent

4. Eye

- (a) Eyebrows: Normal

- (b) Eyelash: Normal
- (c) Alignment: Well aligned
- (d) Eyelid: Puffy
- (e) Were glasses: No

5. Ear

- (a) Color: Brown
- (b) Size: Normal
- (c) Angle of attachment: Normal

6. Nose

- (a) Symmetry: Symmetrical
- (b) Discharge: Not present

7. Mouth

- (a) Color of lips: Brownish
- (b) Bacall Mucosa: Dry
- (c) Teeth: Yellowish

8. Neck

- (a) Size: Normal
- (b) Symmetry: Normal
- (c) Range of Motion: Well
- (d) Lymph Nodes: Normal

5. Systemic Examination

5.1. Chest

5.1.1. Inspection

1. Skin: - Normal
 - (a) No redness but Pallor
 - (b) Equal movement or both sides
 - (c) No scars/bulge
 - (d) No added Sounds

5.2. CVS

1. No murmurs
2. Heart Rate: 110Bbpm

5.3. Abdomen

5.3.1. Inspection

1. Abdomen distended symmetrically all quadrants moving equally with respiration

5.3.2. Palpation

1. Hepatomegaly +
2. Splenomegaly +
3. Percussion: Ascites +
4. Auscultation: Bowel Sound +
5. No bruit

5.4. Muscular skeleton system

1. Normal Tone
2. No Muscle atrophy
3. Asteriaais

5.5. Intergumertary system

1. Inspection: Skin is wet due to sweating
2. Palpation: Swelling /mass deducted, edema present

5.6. Neurological system

1. Level of Consciousness: Loss of Consciousness, Altered Sensuous, Irrelevant talking

5.7. Excretory system

1. Melena, Constipation

5.8. Vital assessment

1. Plus Rate: 110Bpm
2. Spo2: 98%
3. Blood pressure: 102/56 mmHg
4. Respiration Rate: 18/min

Table 2: Investigations

Investigation	Result	Reference Range
RBC	2.95	4.20-6.50
HGB	7.8	12-16
PLT	15	150-450
WBC	3.2	4-10
NEUT%	76.1	40-75
MOMO%	5.6	1-10
BASO%	0.2	0-1
EO%	0.1	1-6

Table 3: LFT/KFT

Investigation	Result	Reference Range
Urea	35	10-45
Creatinine	0.97	0.50-1.50
Billinubin	2.77	0.30-1.50
SGPT/ALT	19	0-45
ALP	79	30-141
Total Protein	6.27	5.50-8.50
Albumin	2.97	3.50-5.20

6. Disease Condition

1. Chronic Liver Disease

6.1. Description of disease condition

Chronic liver disease is a disease process of the liver that involves a process of progressive destruction and

regeneration of liver parenchyma leading to fibrosis and cirrhosis.^{14–17}

Chronic liver disease refers to disease of the liver which lasts over a period of six months. It consists of a wide range of liver pathologies which included inflammation (chronic hepatitis) liver cirrhosis and hepatocellular carcinoma. The entire spectrum need not be experienced.

Table 4: Etiology/Risks factors

Book Picture	Patient Picture
Hepatitis	Nonalcoholic liver disease
Epstein Barr Virus (EBV)	
Alcoholic liver Disease	
Non Alcoholic liver disease	
Auto immune hepatitis	

Table 5: Clinical manifestation

Book Picture	Patient Picture
Nail Clubbing	Anemia
Anemia	Drowsiness
Drowsiness	Ascites
Ascites	Pallor
Hyperventilation	
Jaundice	
Bruising	
Testicular atrophy	

Table 6: Diagnostic evaluation

Book Picture	Patient Picture
History Collection	History Collection
Physical examination	Physical examination
LFT's	LFT
Ultrasound	
Biopsy	

6.2. Management

The treatment of chronic liver Disease depends on the cause. Specific conditions may be treated with medications including:-

1. Corticosteroids
2. Interferon
3. Antiviral

Supportive therapy for complication of cirrhosis included diuretics, albumin, Vitamin K, Blood products, antibiotics. Nutritional therapy.

Other patients may require surgery or a transplant.

6.3. Assessment

1. Subject Data: After introduction, the patient as well as her daughter in law agreed to explain the problem. The

patient was complaining of pain in Abdomen radiating towards back with fever and 3-4 episodes of loose stools.

2. Objective Data: On assessing the patient, she seemed in pain and distress with altered sensorium. The patient was taking irrelevantly as had yellow discoloration. The patient lay flat on the bed and showed fatigue as weakness.
3. On examining the patient had ascites with asterix and Hepatomegaly and splenomegaly.
4. Vital Signs
 - (a) PR—110bPm
 - (b) SPO₂—98%
 - (c) BP—102/56 mmHg
 - (d) RR—18/min

7. Progress Note

1. The patient's mental status was returned to normal.
2. The patient was able to maintain a normal and effective breathing.
3. The client's pain got significantly reduced.
4. The client was relieved of pain as appeared to be more relaxed in a couple of days.
5. The patient's anxiety got reduced.
6. The patient displayed appropriate range of feelings and lessened fear.

8. Health Teaching

1. I advised the patient to avoid all substances that can further damage the liver.
2. I advised that the patient should lower the consumption of salt in the diet.
3. I advised the patient to keep up with the medications and return to the follow-ups.
4. I advised the patient to take healthy foods and supplements.
5. I advised the patient and his family members about getting vaccines for virus that can further damage the liver.

8.1. Advice on discharge

1. The patient was advised to take:-
2. Tab CARCA 3.125mg BD
3. Tab Rifampin 550mg BD
4. Tab Aldactone 50mg OD
5. Tab Trombopag 50mg OD for 1 week, repeat CBC
6. Low Salt Diet
7. Syb 100Z 15mL BT

Moreover, the patient was advised to repeat CBC in a week, follow up in OPD 137/138, to be related for TACE once platelet count is more than 60k.

Table 7: Nursing core plan

Nursing Diagnosis	Goal/objective	Interventions	Evaluation
Disturbed fluid volume related to decreased plasma protein as evidenced by edema	To achieve normal electrolyte levels as no edema	Monitored serum Albumin and electrolyte levels. Administered medications as ordered. Monitored patients input/output	Edema was reduced.
Impaired Skin integrity related to altered metabolic state as evidenced by poor skin turgor, edema and ascites	Maintain the skin free from breakdown	Assisted the patient in repositioning. Elerated lower extremities to facilitate reduction of edema by placing a pillow under her legs. Inspected the patients skin thoroughly, taking note of the pressure points.	Skin Integrity was maintained.
Altered mental status related to inability of liver to detoxify toxins as evidenced by confusion, irrelevant taking and altered sensation	To maintain usual level of reality orientation	Observed the signs and symptoms of behavioral change: Lethargy, confusion, drowsiness, shivering of speech and irritability. I reviewed current medication regime for any adverse reaction. I learned about patient sleep schedule.	The patient was reoriented to the reality with time.
Ineffective breathing pattern related to the accumulation of intra abdominal fluid as evidenced by increased abdominal girth, presence of edema	To maintain and effective respiratory pattern and vital sings within acceptable limits.	Monitored respiration rate, depth and effort taken by the patient. I maintained the head of bed elevated at 30 Degree. Monitored ABG,s and vital signs as O2 saturation. Administered diuretics to get rid of the excess fluid.	Effective respiratory pattern was achieved to certain extend.

Table 8: Diet chart

Name of the Drug	Pharmacological Action	Range	Route	Indication	Contraindication	State effect	Nurses Responsibility
Carca (Carvedild)	It slows down the heart and lowers the blood pressure	3.125 mg BD	Oral	Hypertension Angina Heart failure	Serere brady Cordial serer Hypotension hypersensitivity	Decreased B.P Headache fatigue Dizziness	Should be taken with food. Make Sure patient doesn't stop care suddenly, it should be tapered down
Rifaximin (Rif gut)	It lowers the levels of ammonia producing bacteria in blood	550mg BD	Oral	Hepatic encephalopathy	Hypersentivity	Dizziness Nausea edema Asaites fatigue	It should be discontinued if the patient has server Dtorrbe
Aldactone	Lower B.P by re Moring Excess salt as H ₂ O without loss of K	5 mg OD	Oral	Hypertension edema Hypokalemia	Hyperkalemia Hyponatxmia Aaite Kidney failure	Nausea Vomiting leg ramps Dizziness	Should be taken with food. Unsafe to use during pregnant
Vitom K	Corrects PT in patient with Cirrhosis to correct coagulopathy	10mg	IM	Hepatic failure VK deficiency Cystic fibrosis	Renal impairment Hypersensitivity	Diarrhea	Cheek for hypersensitivity

9. Summary

A 70-year-old female admitted in hospital with CLD with encephalopathy. The patient has been gastro enterology since 8 days during which complete care was provided. A proper medication was given and was observed for complications.

10. Source of Funding

None.

11. Conflict of Interest

None.

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Author biography

Mohsina Aalia Mushtaq, Student

Cite this article: Mushtaq MA. Navigating the complexities: A case study on chronic liver disease. *IP J Paediatr Nurs Sci* 2024;7(2):75-80.