DIET IN DISORDERS OF LIVER
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Introduction

• Liver is the largest gland in the body, which plays a vital role, performing many complex functions essential for life.

• Liver serves as our body's internal chemical power plant.

• The health of the liver is a major factor in the quality of our life.
Liver diseases are

- Jaundice
- Hepatitis (A,B,C,D,E)
- Cirrhosis
Jaundice

- Jaundice is characterized by yellow colour of skin and tissues.
- In jaundice, the blood levels of bile pigments are high.
- This is a frequent sign of liver and biliary tract diseases.
- Decreased functioning of the liver or obstruction to the flow of bile from the liver leads to jaundice.
Symptoms

- The symptoms consist of yellow pigmentation of conjunctiva, skin and body tissues
Therapy

- The primary aim is to protect the liver from further stress and help it to function as normally as feasible.

- Therefore, a nutritionally adequate diet is basic to avoid permanent damage.
Diet

The modification of diet is based on

• Generous intake of good quality protein to regenerate tissues and prevent fatty infiltration.
• High carbohydrate intake to spare protein and synthesis of glycogen
• A moderate fat restriction
• Providing vitamin supplements and
• Ensuring sodium restriction, if there is edema.
Hepatitis

• Hepatitis is the disease that causes inflammation of the liver can result from viral infections, alcohol, drugs, or toxins.

• There are five types of hepatitis. The most common types are A, B and C.
• Hepatitis A is spread by the fecal-oral route and rarely by blood transfusion.

• Hepatitis B is spread by body fluids such as blood, saliva, semen, and vaginal secretions and by contaminated inanimate objects.

• Hepatitis C is primarily parenterally transmitted, with the highest incidence occurring in drug users and hemophiliac clients.
Symptoms

- Loss of appetite
- Fatigue
- Mild fever
- Muscle or joint aches
- Nausea and vomiting
- Abdominal pain
Dietary principle of hepatic liver disease

• In hepatitis the main therapy consist of nutritionally adequate diet and bed rest.

• The aim is to ensure recovery of damaged tissues and to prevent further damage.

• In hepatitis a high calorie, high protein diet is given.
• Calories: 3000-4000 k.cal/day.

• Protein: 1.5 to 2 g/day/kg body weight. Ample intake of protein is essential for regeneration of liver cells.

• Fat: A range of 10 to 15 percent of calories as fat is generally recommended.

• Fluids and electrolytes: Sodium is commonly restricted to 2 g/day. Fluid intake is usually restricted to 1 liter/day, depending upon the severity of the edema, ascites, and low sodium
General dietary advice

• Give a full liquid diet in six small feeds, as soon as patient is able to eat

• Follow it by a soft fiber- restricted diet and then a normal diet

• Maintain healthy calorie intake
• Eat whole-grain cereals, breads, and grains
• Eat lots of fruits and vegetables
• Go easy on fatty, salty and sugary foods
• Drink enough fluids
• Reach and maintain a healthy weight
Avoid foods

- Tap water
- Junk food
- Hydrogenated oils like peanut oil, cottonseed oil
- Dairy products
- Fruits juices
- Artificial sweeteners
- Processed foods and alcohol
Cirrhosis

• The word cirrhosis comes from a French word for orange.

• In cirrhosis the liver becomes fibrous and contains orange colored nodules that resemble the skin of an orange.

• Cirrhosis, most frequently caused by hepatitis C or alcoholism.

• Liver cirrhosis is a chronic disease in which there is considerable damage to its cells, with infiltration by fats and fibrosis.
Signs and symptoms of cirrhosis

- Cirrhosis causes anorexia,
- Epigastric pain, and nausea that worsens as the day goes on.
- Abdominal distention
- Vomiting
- Steatorrhea
- Jaundice
- Ascites
- Edema, and gastrointestinal bleeding.
- The end result of cirrhosis is liver failure, which leads to hepatic coma.
Dietary management

Patients with cirrhosis require a balanced diet providing

- **Energy:** High kcal diet (50kcal/kg body weight) is recommended
- **Carbohydrate:** Adequate carbohydrate i.e. 300-400 g should be provided to spare protein
- **Protein:** 1.0-1.5 g protein/kg/day
- **Two much protein will result in an increased amount of ammonia in the blood, too little protein can reduce healing of liver.**
Fat: low to moderate fat (25% of kcal) have to be provided if bile is inadequate.

Vitamins and minerals:

• Fat soluble vitamins and thiamine to be supplemented.
• Fluid and electrolyte balance demands ongoing attention.
• If the client has ascites, sodium probably will be restricted.
• Restriction of fluid intake in hyponatremia.
Other liver diseases

• In which diet changes aid recovery include Cholestasis and steatorrhoea.

• In this the bile cannot flow into the small intestine to aid in the digestion of fat.

• Back up of bile in the liver is called cholestatis. Fat is not absorbed and is excreted in large amounts in the feces.

• When feces become pale-coloured and foul smelling. This is called steatorrhoea.
Conclusion

• Common liver disorders include hepatitis; the different types of hepatitis can be transmitted by food, by body fluids and wastes, and sometimes by inanimate objects.

• Complete recovery is the usual outcome of hepatitis A, but hepatitis B is thought to cause 80% of hepatocellular cancer.

• Vaccines are available to prevent these two types of hepatitis.
• Hepatitis C often progresses to a chronic infection that significantly increases the risk of cancer of the liver or cirrhosis.

• Cirrhosis an inflammatory condition resulting from tissue damage by such toxins as excessive alcohol.

• Uncontrolled cirrhosis leads to another major liver disorder, hepatic encephalopathy.

• Although nutrients and kilocalorie levels required vary with each condition.