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Decoding Pediatric Hepatitis

A Nurse's Handbook

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A Nurse's Handbook



"Decoding Pediatric Hepatitis: A Nurse's Handbook" serves as a comprehensive resource tailored specifically for healthcare professionals, especially nurses, seeking to deepen their understanding and proficiency in managing pediatric hepatitis. From unraveling the intricacies of its definition and pathophysiology to guiding practitioners through the nuances of diagnosis, treatment, and nursing care management, this handbook aims to equip nurses with the essential knowledge and skills required for effective intervention. Each chapter meticulously dissects the complex mechanisms underlying hepatitis in children, encompassing autoimmune factors, risk factors, and a diverse range of symptoms essential for early recognition and intervention. The diagnostic journey is meticulously outlined, covering vital elements such as medical history assessment, laboratory tests, imaging studies, liver biopsy, and viral hepatitis testing, facilitating accurate identification and classification of hepatitis cases. Furthermore, treatment modalities, including antiviral drugs, immunoglobulin therapy, immunosuppressants, and lifestyle modifications, are comprehensively explored to provide nurses with diverse strategies for optimal patient care. Employing the nursing process method, the nursing care management chapter emphasizes assessment, diagnosis, planning, implementation, and evaluation to deliver holistic and patient-centered care. By synthesizing current evidence-based practices and promoting interdisciplinary collaboration, "Decoding Pediatric Hepatitis: A Nurse's Handbook" equips nurses with the necessary tools to optimize outcomes and enhance the quality of life for children affected by hepatitis and their families. With its practical approach and comprehensive coverage, this handbook serves as an indispensable guide for nurses engaged in the care of pediatric patients with hepatitis, facilitating informed decision-making and ultimately improving patient outcomes.



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DECODING PEDIATRIC HEPATITIS: A NURSE'S HANDBOOK

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PREFACE

Alhamdulillaahil-ladzii bini'mathihi tatimmush-saalihaat. Praise be to Allah, Who has made all good deeds perfect. The book is titled: Decoding Pediatric Hepatitis: A Nurse's Handbook. This comprehensive guide on pediatric hepatitis offers healthcare professionals, especially nurses, an in-depth exploration of the condition's multifaceted aspects, from its definition, Epidemiology and pathophysiology to diagnosis, treatment, and nursing care management. Beginning with an emphasis on the importance of early recognition and intervention, subsequent chapters meticulously dissect the intricate mechanisms underlying hepatitis in children, including autoimmune factors, risk factors, and the diverse range of symptoms indicative of the condition's presence. The diagnostic journey is thoroughly mapped out, covering essential elements such as medical history assessment, laboratory tests, imaging studies, liver biopsy, and viral hepatitis testing, providing a robust foundation for accurate identification and classification of hepatitis cases. Treatment modalities, including antiviral drugs, immunoglobulin therapy, immunosuppressants, and lifestyle modifications, are comprehensively examined to empower healthcare professionals with diverse strategies for effective intervention. Crucially, the nursing care management chapter employs the nursing process method, emphasizing assessment, diagnosis, planning, implementation, and evaluation to guide practitioners in delivering holistic and patient-centered care. By synthesizing current evidence-based practices and emphasizing interdisciplinary collaboration, this guide equips healthcare professionals with the requisite knowledge and skills to optimize outcomes and enhance the quality of life for children affected by hepatitis and their families. Through its comprehensive coverage and practical approach, this guide aims to serve as a valuable resource for healthcare professionals engaged in the care of pediatric patients with hepatitis, facilitating informed decision-making and ultimately improving patient outcomes.

Padang, March 2024

Arif Rohman Mansur

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UNIT |

1 | INTRODUCTION

A. Definition Hepatitis In Children



Figure 1. 1 Hepatitis in Children

Hepatitis in children is a condition characterized by liver inflammation resulting from viral infections or other causes. Symptoms of hepatitis in children may include jaundice, fatigue, and abdominal pain, with potential complications leading to liver damage and long-term health issues (Baker et al., 2022). While it is generally perceived that most children with hepatitis recover fully with appropriate treatment, there are contrasting perspectives in the literature. Liang et al. (2023) suggest that

UNIT 2 | PATHOPHYSIOLOGY OF HEPATITIS

The pathological changes occur mainly in liver parenchymal cells resulting in swelling of the liver and infiltration of liver cells by mononuclear cells. This condition causes changes in the structure of hepatocytes by altering the number and function of the liver, such as biliary excretion disorders, increased transaminases (liver enzymes), and decreased albumin synthesis. The disorder can be limited to the area, with cell regeneration without scar, the possibility of perfect cure. However, some forms of hepatitis are unable to restore the liver to its normal function. These include fulminant hepatitis, which has characteristics of severe, acute massive damage to liver tissue caused by liver failure, developing into chronic Hepatitis with a fairly high mortality rate (Luxner & Jaffe, 2005).

UNIT

3

SYMPTOMS OF HEPATITIS

A. Symptoms of Hepatitis in Children

Symptoms of hepatitis in children can vary widely, with some cases being asymptomatic while others present with noticeable signs. Studies have shown that hepatitis C in children can often be asymptomatic (El-Raziky, 2007). On the other hand, children with hepatitis A infection may exhibit symptoms such as nausea, anorexia, vomiting, jaundice, abdominal pain, hepatomegaly, bleeding manifestations, or encephalopathy (Murlidharan et al., 2022). Additionally, there have been reports of acute hepatitis cases in children with unknown origins, leading to concerns in healthcare systems (Costa et al., 2023; Zhang et al., 2022).

The clinical manifestation of acute hepatitis depends on the underlying etiology. The disease can show clinical symptoms ranging from improved liver function tests, without symptoms of acute liver respiratory failure requiring liver transplantation. Therefore, determining the etiology of the acute hepatitis is the most important thing in its clinical implementation. Health professionals need to identify a medical history in detail that includes the duration of the disease, travel/travel history, and assess high-risk activities such as drug use, alcohol consumption, sexual history, history of previous blood transfusions and recent nutritional intake. The assessment also includes a history of medication use, both prescribed by a doctor and free-selling drugs such as paracetamol, cold cough medications containing

UNIT | DIAGNOSIS OF 4 HEPATITIS IN CHILDREN

A. Medical History and Physical Examination

To diagnose hepatitis in children, a comprehensive approach involving medical history and physical examination is crucial. While laboratory tests play a role, the significance of history taking and physical assessment cannot be understated. Studies have shown that a detailed medical history and thorough physical examination are essential components in diagnosing various medical conditions (Peterson et al., 1992). In the case of hepatitis, a study on hepatic steatosis in obese children highlighted the importance of medical assessment in identifying nonalcoholic fatty liver disease (NAFLD) (Chan et al., 2004). Additionally, a review on acute abdominal pain in children emphasized that medical history, physical examination, and test findings have a higher sensitivity for distinguishing between urgent and non-urgent diseases (Alanazi et al., 2021).

When it comes to pediatric patients, especially in cases of suspected liver involvement like in inflammatory bowel disease, a combination of clinical evaluations including history and physical examination are fundamental in reaching a diagnosis (Jang et al., 2018). Furthermore, in the context of liver-related malignancies such as non-Hodgkin lymphoma, successful treatment often hinges on accurate diagnosis facilitated by a thorough medical history and physical examination (Chamberlain et al., 2021).

UNIT | CLASSIFICATION

5 | HEPATITIS IN CHILDREN

A. Etiology (Cause)

1. Hepatitis A Virus (HAV)

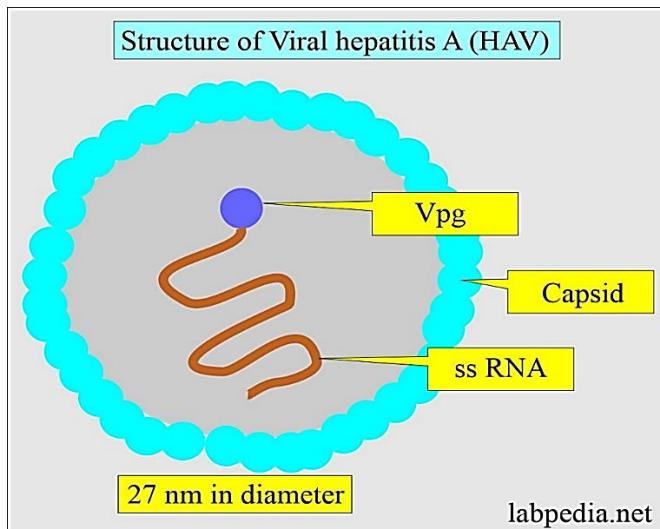


Figure 5. 1 Hepatitis A Virus

Source: <https://labpedia.net/hepatitis-a-virus-hav/>

Hepatitis A virus (HAV) is a well-known cause of viral hepatitis transmitted primarily through the fecal-oral route (Siddique et al., 2012). Until 1980, HAV was recognized as the sole type of water-borne viral hepatitis (Purcell & Emerson, 2008). HAV is characterized by a single serotype and seven

UNIT | TREATMENT OF HEPATITIS IN CHILDREN

6

A. Medications antiviral drugs



Figure 6. 1 Antiviral Drug's

Source: <https://medikamio.com/en-gb/magazine/antiviral-treatment-for-hepatitis-c-with-success>

Antiviral therapy is essential in the treatment of chronic hepatitis in children. The main objective of antiviral treatment for chronic hepatitis B virus (HBV) infection in children is to eradicate the virus and prevent associated liver complications (Shah et al., 2009). While the long-term efficacy of antiviral

UNIT |

7 | NURSING CARE MANAGEMENT

Nursing care management for children with hepatitis is a critical aspect of ensuring positive outcomes and quality of life for these young patients. Effective nursing care has been shown to decrease complications, re-hospitalization rates, mortality, and treatment costs while improving the overall quality of life for children with hepatitis (Nguyen et al., 2023). Nurses play a central role in providing holistic care, symptom management, emotional support, and coordinating services for patients and their families in palliative care settings, which can be extended to children with hepatitis (Dunne et al., 2005).

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