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ETIOLOGICAL SPECTRUM AND CLINICAL PROFILE OF HEPATOMEGALY IN HOSPITALIZED CHILDREN: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Hepatomegaly is a common clinical finding in hospitalized children and may result from a wide range of hepatic and systemic disorders. Its etiological pattern varies according to age, geographical location, socioeconomic conditions, nutritional status, and prevalence of infectious and haematological diseases. A systematic evaluation of affected children is essential for identifying the underlying cause and initiating appropriate management. **Aim:** To determine the etiological spectrum and clinical profile of hepatomegaly among children admitted to a tertiary-care hospital. **Materials and Methods:** Present study was conducted over a period of one and a half years. A total of 104 hospitalized children with clinically detected hepatomegaly were enrolled after obtaining written informed consent from their parents or legally authorized representatives. Detailed demographic and socioeconomic information, nutritional status, clinical history, physical examination findings, grade of hepatomegaly, investigations, diagnosis, and treatment details were recorded in a predesigned proforma. Complete blood count, peripheral smear, liver function tests, and other investigations, including ultrasonography and radiography, were performed as clinically indicated. Data were analysed using descriptive and appropriate inferential statistical methods. **Results:** Among the 104 children, 60 (57.7%) were males and 44 (42.3%) were females. Children younger than 5 years constituted 36.5% of the study population, while 58.7% belonged to the lower socioeconomic class. Among children younger than 5 years, moderate and severe acute malnutrition were present in 36.8% and 23.7%, respectively. Fever was the most common clinical presentation, observed in 74 (71.2%) children, followed by pallor or anaemia in 68 (65.4%) and splenomegaly in 57 (54.8%). Moderate hepatomegaly was the most frequent grade, occurring in 52 (50.0%) patients, while mild and massive or severe hepatomegaly were observed in 34.6% and 15.4%, respectively. SGPT and SGOT levels were below 100 IU/L in 78.8% and 83.7% of patients. Haematological disorders were the leading etiological category, accounting for 58.7% of cases, predominantly sickle-cell disease (57.7%). Infectious causes accounted for 27.9%, with viral hepatitis and dengue contributing 10.6% and 8.7%, respectively. **Conclusion:** Haematological disorders, particularly sickle-cell disease, were the predominant causes of hepatomegaly in hospitalized children, followed by infectious diseases. Fever, anaemia, and splenomegaly were the major associated clinical findings. Early systematic clinical and laboratory evaluation is important for accurate diagnosis and appropriate management.

INTRODUCTION

Hepatomegaly is enlargement of the liver beyond the expected limits for a child's age, sex, body size, and stage of growth. It is a physical sign rather than a disease and may be detected during routine examination or during evaluation of fever, pallor, jaundice, abdominal distension, pain, nutritional

problems, or systemic illness. In younger children, the normal liver edge may be palpable below the right costal margin; therefore, apparent enlargement should be confirmed by assessing liver span, consistency, surface, tenderness, and associated findings. Its significance ranges from a transient response to infection to severe hepatic or multisystem disease. In hospitalized children, detection of hepatomegaly requires a structured and timely diagnostic approach.[1]

The etiological spectrum of hepatomegaly in childhood is broad and differs from that in adults. Enlargement may result from hepatocellular inflammation, cellular infiltration, abnormal storage of metabolic substances, vascular congestion, biliary obstruction, increased reticuloendothelial activity, extramedullary haematopoiesis, or focal and diffuse masses. Important categories include infectious, haematological, metabolic, genetic, congestive, obstructive, autoimmune, nutritional, toxic, and neoplastic disorders. Massive hepatomegaly raises concern for storage diseases, hepatic malignancies, infiltrative disorders, vascular obstruction, and severe congestion. Liver size alone does not establish the cause and must be interpreted with age, duration of illness, clinical condition, and accompanying systemic features.[2] Age at presentation provides an important diagnostic clue. In infants, cholestatic and obstructive disorders, congenital infections, metabolic diseases, and genetic conditions require consideration. In toddlers and young children, systemic infections, nutritional disorders, glycogen storage diseases, lysosomal storage diseases, and haematological conditions may predominate. In older children and adolescents, viral hepatitis, haemolytic disorders, autoimmune disease, Wilson disease, cardiac causes, drug-related injury, and steatotic liver disease become relevant. Hepatomegaly associated with splenomegaly, developmental delay, skeletal abnormalities, neurological deterioration, dysmorphism, or a positive family history should prompt assessment for inherited metabolic disease and appropriate biochemical, enzymatic, or molecular testing.[3]

Haematological diseases are important causes of liver enlargement in regions where haemoglobinopathies are prevalent. Chronic haemolysis, sequestration, extramedullary haematopoiesis, iron overload, transfusion-related complications, and vascular injury may contribute to hepatobiliary involvement. In sickle cell disease, manifestations range from asymptomatic enlargement and mild biochemical abnormalities to acute hepatic crisis, hepatic sequestration, cholestasis, gallstone disease, fibrosis, and liver failure. Pallor, jaundice, splenomegaly, fever, abdominal pain, and altered liver enzymes may accompany hepatomegaly, but these findings are not specific. Differentiating primary hepatic injury from the effects of the underlying blood disorder is essential for selecting investigations and preventing complications.[4]

Nutritional status also has a complex relationship with hepatomegaly. Undernutrition may be associated with fatty change, impaired protein synthesis, oedema, increased susceptibility to infection, and deficiencies affecting hepatic function. Conversely, overweight and obesity are increasingly associated with metabolic dysfunction-associated steatotic liver disease in children and adolescents. This condition may be clinically silent and suspected because of hepatomegaly, increased aminotransferase levels, or abnormal imaging. Assessment should include anthropometry, dietary history, physical activity, signs of insulin resistance, and cardiometabolic risk factors. Considering both undernutrition and excess weight is important in hospital-based pediatric populations, where a double burden of malnutrition may occur.[5]

Clinical evaluation begins with a detailed history covering abdominal enlargement, fever, jaundice, stool and urine changes, bleeding, drug exposure, transfusions, recurrent infections, growth, development, diet, cardiac symptoms, travel, and family history. Examination should document the degree and character of hepatomegaly and identify pallor, icterus, oedema, ascites, splenomegaly, lymphadenopathy, features of chronic liver disease, cardiac failure, and neurological abnormalities. Initial investigations include a complete blood count, peripheral smear, bilirubin, aminotransferases, alkaline phosphatase, albumin, coagulation profile, and targeted infectious tests. Ultrasonography is the preferred initial imaging method for assessing liver size and echotexture, biliary dilatation, focal lesions, vascular flow, splenic enlargement, ascites, and features of chronic disease.[6] Limited data are available regarding the etiological spectrum and clinical profile of hepatomegaly among hospitalized children in Western India, particularly in regions with a high prevalence of sickle-cell disease. Therefore, the present study was undertaken to determine the etiological spectrum and clinical profile of hepatomegaly among children.

MATERIALS AND METHODS

Present study was conducted over a period of one and a half years. All children admitted to the Department of Pediatrics were screened for hepatomegaly, and those found to have hepatomegaly were enrolled in the study. A total of 104 patients were included. Each patient or legally authorized representative was provided with a participant information sheet containing detailed information about the study, and written informed consent was obtained before enrollment. A detailed clinical history was recorded, and a thorough physical examination was performed for every patient. Information regarding age, gender, hospital identification number, address, contact number, clinical symptoms, investigations, diagnosis, and treatment was collected from the case records. Reports of complete blood count, peripheral smear examination, and liver function tests were

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documented in a predesigned proforma. Other investigations, including radiography and ultrasonography, were performed whenever clinically indicated. No additional financial burden was imposed on the patients or their relatives for the purpose of the study.

Statistical Analysis: The collected data were simultaneously recorded in the study proforma, entered into Microsoft Excel, and analysed. Nominal data were presented as numbers and percentages, while continuous data were expressed as mean and standard deviation. The chi-square test and Student's *t*-test were applied as appropriate.

RESULTS

Table 1: Demographic, Socioeconomic and Nutritional Profile of the Study Population

A total of 104 hospitalized children with hepatomegaly were enrolled in the study. Males constituted the majority of the study population, accounting for 60 (57.7%) cases, while females comprised 44 (42.3%) cases, resulting in a male-to-female ratio of approximately 1.4:1. Regarding age distribution, children younger than 5 years represented the largest group with 38 (36.5%) patients, followed closely by those aged 5–10 years with 37 (35.6%) patients. Adolescents aged 10–18 years constituted 29 (27.9%) cases. Analysis of socioeconomic status revealed that the majority of patients belonged to lower socioeconomic strata. Sixty-one (58.7%) children were from the lower socioeconomic class, while 34 (32.7%) belonged to the upper-lower class and only 9 (8.7%) were from the lower-middle class. Assessment of nutritional status among children younger than 5 years showed that only 15 (39.5%) had adequate nutrition. Moderate acute malnutrition was present in 14 (36.8%) children, while severe acute malnutrition was observed in 9 (23.7%) children. Among children aged 5–18 years, the majority, 45 (68.2%), had adequate nutritional status. However, undernutrition was identified in 6 (9.1%) children, while overweight and obesity were observed in 11 (16.7%) and 4 (6.1%) children, respectively.

Table 2: Clinical Profile of the Study Population According to Age and Gender

Fever was the most common presenting symptom and was observed in 74 (71.2%) children. It was distributed across all age groups, affecting 28 children below 5 years, 25 children aged 5–10 years, and 21 children aged 10–18 years. Fever was more commonly observed among males (48 cases) compared to females (26 cases), reflecting the predominance of infective etiologies and hematological disorders in the study population. Pallor or anemia was the second most common clinical finding, present in 68 (65.4%) patients. The highest frequency was noted among children aged 5–10 years (29 cases), followed by children below 5 years (23 cases) and those aged 10–18 years (16 cases). The distribution was comparable between males (37 cases) and females (31 cases), suggesting that anemia was a major associated clinical feature irrespective of gender. Splenomegaly was detected in 57 (54.8%) children and was particularly common among older children aged 10–18 years (24 cases). It was observed in 31 males and 26 females. Lymph node enlargement was noted in 19 (18.3%) patients, with the highest occurrence among children aged 5–10 years (9 cases). Oedema was observed in 17 (16.3%) patients and was more frequent in older children aged 10–18 years (8 cases). Jaundice or icterus was present in 12 (11.5%) patients and was distributed relatively evenly across age groups. Ascites was identified in only 6 (5.8%) children, most commonly among those aged 5–10 years. Developmental delay or neurological deterioration was an uncommon finding, observed in only one child below 5 years of age, likely corresponding to a metabolic etiology such as Wilson disease.

Table 3: Grade of Hepatomegaly According to Age and Gender

Moderate hepatomegaly was the most common grade observed in the study, affecting 52 (50.0%) children. Mild hepatomegaly was noted in 36 (34.6%) patients, while massive or severe hepatomegaly was present in 16 (15.4%) patients. Age-wise analysis demonstrated that moderate hepatomegaly predominated in all age groups. Among children younger than 5 years, 17 (44.7%) had moderate hepatomegaly, while 14 (36.8%) had mild enlargement and 7 (18.4%) had massive hepatomegaly. In the 5–10 years age group, moderate hepatomegaly was observed in 19 (51.4%) patients, followed by mild hepatomegaly in 12 (32.4%) and massive hepatomegaly in 6 (16.2%) children. Similarly, among children aged 10–18 years, moderate hepatomegaly was the predominant grade, affecting 16 (55.2%) patients. Gender-wise analysis revealed a similar distribution of hepatomegaly grades. Among males, moderate hepatomegaly was present in 29 (48.3%) cases, while mild and severe hepatomegaly were observed in 22 (36.7%) and 9 (15.0%) cases, respectively. Among females, moderate hepatomegaly was seen in 23 (52.3%) patients, followed by mild hepatomegaly in 14 (31.8%) and severe hepatomegaly in 7 (15.9%) patients.

Table 4: Distribution of the Study Population According to Serum Transaminase Levels

Serum transaminase levels were evaluated using SGPT and SGOT measurements. Most patients had transaminase levels below 100 IU/L. SGPT levels below 100 IU/L were recorded in 82 (78.8%) patients, while SGOT levels below 100 IU/L were observed in 87 (83.7%) patients. Moderately elevated enzyme levels (100–400 IU/L) were found in 14 (13.5%) patients for SGPT and 11 (10.6%) patients for SGOT. Markedly elevated levels exceeding 400 IU/L were observed in only 8 (7.7%) patients for SGPT and 6 (5.8%) patients for SGOT.

Table 5: Etiological Spectrum of Hepatomegaly in the Study Population

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The etiological distribution revealed that hematological disorders were the leading cause of hepatomegaly, accounting for 61 (58.7%) cases. Within this category, sickle cell disease alone contributed 60 (57.7%) cases, making it the single most common cause of hepatomegaly in the study population. Only one patient (1.0%) was diagnosed with leukemia, and no cases of thalassemia were identified. Infectious diseases constituted the second most common etiological category, accounting for 29 (27.9%) cases. Viral hepatitis was the most frequent infectious cause, observed in 11 (10.6%) patients, followed by dengue fever in 9 (8.7%) patients. Enteric fever, malaria, and tuberculosis contributed 4 (3.8%), 3 (2.9%), and 2 (1.9%) cases, respectively. Miscellaneous causes accounted for 10 (9.6%) cases. Severe acute malnutrition was responsible for 9 (8.7%) cases, emphasizing the impact of nutritional disorders on liver enlargement in children. Wilson disease was identified in one patient (1.0%). Less common etiologies included congestive cardiac failure in 2 (1.9%) patients, congenital biliary atresia in 1 (1.0%) patient, and systemic juvenile idiopathic arthritis in 1 (1.0%) patient.

Table 1: Demographic, socioeconomic and nutritional profile of the study population

Variable	Category	Frequency (n)	Percentage (%)
Gender (n=104)	Male	60	57.7
	Female	44	42.3
Age group (n=104)	<5 years	38	36.5
	5–10 years	37	35.6
	10–18 years	29	27.9
Socioeconomic status (n=104)	Lower	61	58.7
	Upper-lower	34	32.7
	Lower-middle	9	8.7
Nutritional status among children <5 years (n=38)	Adequate	15	39.5
	Moderate acute malnutrition	14	36.8
	Severe acute malnutrition	9	23.7
Nutritional status among children 5–18 years (n=66)	Adequate	45	68.2
	Undernutrition	6	9.1
	Overweight	11	16.7
	Obese	4	6.1

Table 2: Clinical profile of the study population according to age and gender

Clinical finding	Total, n (%)	<5 years (n=38)	5–10 years (n=37)	10–18 years (n=29)	Male (n=60)	Female (n=44)
Fever	74(71.2)	28(26.9)	25(24.1)	21(20.2)	48(46.2)	26(25)
Pallor/anaemia	68(65.4)	23(22.1)	29(27.9)	16(15.4)	37(35.6)	31(29.8)
Splenomegaly	57(54.8)	14(13.5)	19(18.3)	24(23.1)	31(29.8)	26(25)
Lymph-node enlargement	19(18.3)	4(3.8)	9(8.7)	6(5.8)	12(11.5)	7(6.7)
Oedema	17(16.3)	3(2.9)	6(5.8)	8(7.7)	9(8.7)	8(7.7)
Jaundice/icterus	12(11.5)	5(4.8)	3(2.9)	4(3.8)	8(7.7)	4(3.8)
Ascites	6(5.8)	1(0.9)	4(3.8)	1(0.9)	2(1.9)	4(3.8)
Developmental delay/neurological deterioration	1(1.0)	1(0.9)	0(0.0)	0(0.0)	1(1.9)	0(0.0)

Table 3: Grade of hepatomegaly according to age and gender

Study group	Total (n)	Mild, n (%)	Moderate, n (%)	Massive/severe, n (%)
Overall	104	36 (34.6)	52 (50.0)	16 (15.4)
Age group				
<5 years	38	14 (36.8)	17 (44.7)	7 (18.4)
5–10 years	37	12 (32.4)	19 (51.4)	6 (16.2)
10–18 years	29	10 (34.5)	16 (55.2)	3 (10.3)
Gender				
Male	60	22 (36.7)	29 (48.3)	9 (15.0)
Female	44	14 (31.8)	23 (52.3)	7 (15.9)

Table 4: Distribution of the study population according to serum transaminase levels

Serum transaminase level (IU/L)	SGPT, n (%)	SGOT, n (%)
<100	82 (78.8)	87 (83.7)
100–400	14 (13.5)	11 (10.6)
>400	8 (7.7)	6 (5.8)
Total	**104 (100)**	**104 (100)**

Table 5: Etiological spectrum of hepatomegaly in the study population

Etiological category	Specific etiology	Frequency (n)	Percentage (%)
Infective (n=29; 27.9%)	Viral hepatitis	11	10.6
	Dengue	9	8.7

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	Malaria	3	2.9
	Enteric fever	4	3.8
	Tuberculosis	2	1.9
Haematological (n=61; 58.7%)	Sickle-cell disease	60	57.7
	Thalassaemia	0	0.0
	Leukaemia	1	1.0
Congestive (n=2; 1.9%)	Congestive cardiac failure	2	1.9
Obstructive (n=1; 1.0%)	Congenital biliary atresia	1	1.0
Connective-tissue disease (n=1; 1.0%)	Systemic juvenile idiopathic arthritis	1	1.0
Miscellaneous (n=10; 9.6%)	Severe acute malnutrition	9	8.7
	Wilson disease	1	1.0
Total		**104**	**100**

DISCUSSION

The present study included 104 hospitalized children with hepatomegaly and demonstrated a male predominance, with 60 (57.7%) males and 44 (42.3%) females, giving a male-to-female ratio of approximately 1.4:1. Children younger than 5 years constituted the largest age group (36.5%), followed by those aged 5–10 years (35.6%) and 10–18 years (27.9%). Champatiray et al. (2017), in a study of 150 children with hepatosplenomegaly, similarly reported 58.7% males and 41.3% females. However, their population contained a greater proportion of children aged 1 month–5 years (45.3%) and 6–10 years (41.3%), while only 13.3% were aged 11–14 years. In the present study, 58.7% of children belonged to the lower socioeconomic class and 32.7% to the upper-lower class, together accounting for 91.4% of the study population.[7]

Nutritional assessment revealed a considerable burden of malnutrition, particularly among children younger than 5 years. In this age group, only 39.5% had adequate nutritional status, whereas 36.8% had moderate acute malnutrition and 23.7% had severe acute malnutrition; therefore, 60.5% had some degree of acute malnutrition. Among children aged 5–18 years, 68.2% had adequate nutrition, 9.1% had undernutrition, 16.7% were overweight and 6.1% were obese, indicating the coexistence of undernutrition and excess weight. Severe acute malnutrition was also identified as the etiological factor for hepatomegaly in 8.7% of the total study population. Anusha et al. (2014), in their study of 150 children with hepatosplenomegaly, reported failure to thrive in 16.0% of children, while protein-energy malnutrition accounted for only 2.0% of etiological diagnoses. The findings nevertheless indicate that nutritional assessment should form an essential component of the evaluation of every child presenting with hepatomegaly.[8]

Fever was the most common clinical presentation in the present study, occurring in 74 (71.2%) children, followed by pallor or anaemia in 68 (65.4%), splenomegaly in 57 (54.8%), lymph-node enlargement in 19 (18.3%), oedema in 17 (16.3%), jaundice in 12 (11.5%) and ascites in 6 (5.8%). Bricks et al. (1998), in an ambulatory study of 89 children with hepatosplenomegaly, reported fever in 44.0%, jaundice in 16.0% and pallor as a presenting complaint in 29.0%, while pallor was detected on examination in 53.0% and anaemia was confirmed in 79.0%. Thus, fever was markedly more frequent in the present study than in the study by Bricks et al. (71.2% versus 44.0%), whereas confirmed anaemia was less frequent (65.4% versus 79.0%). Jaundice was also slightly less common in the present study (11.5% versus 16.0%).[9]

The clinical pattern observed in the present study was also influenced by the high frequency of sickle-cell disease. Pallor or anaemia was present in 65.4% of children, splenomegaly in 54.8%, fever in 71.2%, jaundice in 11.5%, oedema in 16.3% and ascites in 5.8%. Bokade et al. (2017), in a study of 195 children with sickle-cell disease, reported pallor in 89.23%, splenomegaly in 67.69%, hepatomegaly in 55.89%, icterus in 64.10%, fever in 28.71%, oedema in 3.5% and ascites in 3.5%. Compared with their exclusively sickle-cell population, the present study had lower frequencies of pallor, splenomegaly and icterus but substantially higher frequencies of fever and oedema. The particularly high frequency of icterus reported by Bokade et al. may be associated with chronic haemolysis and hepatobiliary complications in sickle-cell disease. In contrast, the present study comprised children with several infective, nutritional, cardiac, obstructive and inflammatory conditions in addition to sickle-cell disease. This mixed etiological profile may explain the higher fever rate and the lower frequency of overt icterus in the present series.[10]

Moderate hepatomegaly was the predominant grade in the present study, occurring in 52 (50.0%) patients, while 36 (34.6%) had mild hepatomegaly and 16 (15.4%) had massive or severe hepatomegaly. Moderate enlargement remained the most common grade in children younger than 5 years (44.7%), those aged 5–10 years (51.4%) and those aged 10–18 years (55.2%). A similar pattern was observed in males and females, among whom moderate hepatomegaly occurred in 48.3% and 52.3%, respectively. Agrawal et al. (2019), in a study of 146 children up to 10 years of age, reported mild hepatomegaly in 52.74%, moderate hepatomegaly in 38.36% and severe hepatomegaly in 8.9%. Therefore, compared with Agrawal et al., the present study had a lower proportion of mild hepatomegaly (34.6% versus 52.74%) and higher proportions of both moderate (50.0% versus 38.36%) and severe hepatomegaly (15.4% versus 8.9%). This suggests that children in the present hospitalized cohort generally had a

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greater degree of liver enlargement. The difference may be attributable to the high contribution of haematological disorders, the inclusion of adolescents up to 18 years of age, differences in grading criteria and possible differences in the severity of illness at admission.[11]

Most children in the present study did not have marked elevation of serum transaminases. SGPT was below 100 IU/L in 78.8% and SGOT was below 100 IU/L in 83.7%. Levels between 100 and 400 IU/L were observed in 13.5% for SGPT and 10.6% for SGOT, whereas levels above 400 IU/L were found in only 7.7% and 5.8%, respectively. Overall, SGPT and SGOT levels of at least 100 IU/L were present in 21.2% and 16.3% of children. Pazare et al. (2024), in a cross-sectional study of 65 children with sickle-cell anaemia in a steady state, reported mean AST and ALT levels of 37.15±19.8 IU/L and 27.49±22.74 IU/L, respectively. Raised AST was found in 25 (38.46%) children and raised ALT in 8 (12.31%). Although their definition of an elevated enzyme level differed from the categories applied in the present study, both studies suggest that marked hepatocellular enzyme elevation is absent in most children with sickle-cell-related disease. The small subgroup in the present study with transaminase levels above 400 IU/L may represent children with acute viral, dengue-related or other hepatocellular injury; however, etiological cross-tabulation would be required to establish this relationship.[12]

Haematological disorders formed the largest etiological group in the present study, accounting for 61 (58.7%) cases. Sickle-cell disease alone was responsible for 60 (57.7%) cases, whereas leukaemia accounted for one case and no child had thalassaemia. Splenomegaly, which commonly accompanies chronic haemolytic disorders, was present in 54.8% of the total study population. Kazadi et al. (2019), in a study of 256 Congolese children and adolescents with sickle-cell anaemia, reported hepatomegaly in 53.9%, splenomegaly in 41.7% and severe haemolysis in 53.1%. Although the denominators differ—sickle-cell disease was the exposure population in their study but an etiological diagnosis in the present study—the results demonstrate that hepatomegaly and splenomegaly are frequent manifestations of childhood sickle-cell disease. The predominance of sickle-cell disease in the present study may be related to the regional burden of haemoglobinopathy and the referral of affected children to the study hospital. Our study took place in Gujarat region which is one of the sickle belt regions especially in the tribal population so we found the large population of SCD in our study. The absence of thalassaemia and the very low frequency of leukaemia also indicate that the haematological spectrum may vary substantially according to geographical distribution, screening practices and referral patterns.[13]

Infectious diseases were the second most common etiological group in the present study, accounting for 29 (27.9%) cases. Viral hepatitis was responsible for 10.6%, dengue for 8.7%, enteric fever for 3.8%, malaria for 2.9% and tuberculosis for 1.9%. Miscellaneous causes accounted for 9.6%, principally severe acute malnutrition (8.7%), while congestive cardiac failure accounted for 1.9%, congenital biliary atresia for 1.0%, systemic juvenile idiopathic arthritis for 1.0% and Wilson disease for 1.0%. Nguyen et al. (2020), in a study of 107 children with hepatomegaly, reported inflammation or infection, including miscellaneous causes, as the leading category at 50.5%, followed by haematological disorders at 27.1% and congestive heart failure at 12.1%. In their hepatitis group, viral agents constituted nearly 50%, with cytomegalovirus accounting for approximately 30%. In contrast, the present study showed a predominance of haematological disorders (58.7% versus 27.1%) and lower proportions of infectious or inflammatory causes (27.9% versus 50.5%) and congestive cardiac failure (1.9% versus 12.1%). These differences demonstrate that the etiological spectrum of pediatric hepatomegaly is strongly influenced by regional disease prevalence, age composition, referral patterns and the local burden of haemoglobinopathies and infections.[14]

Limitations of the study:

1. Single-centre study.
2. Relatively small sample size.
3. High regional burden of sickle-cell disease, which may have influenced the etiological distribution.
4. Inclusion limited to hospitalized children, reducing generalizability to community settings.
5. Possibility of referral bias in a tertiary-care centre.

CONCLUSION

Hepatomegaly in hospitalized children was most commonly associated with haematological disorders, particularly sickle cell disease, followed by infectious causes. Fever, pallor or anaemia, and splenomegaly were the predominant clinical features, while moderate hepatomegaly was the most frequent grade. A systematic clinical, biochemical, and etiological evaluation is essential for early diagnosis and appropriate management. The observed association involving hepatomegaly should be interpreted cautiously, as the relatively high burden of sickle cell disease in the study population may have contributed to hepatomegaly and confounded the results. Further studies controlling for this potential confounder are needed.

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