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## **DISTINCTIVE CLINICAL FEATURES OF HEPATITIS A IN ADOLESCENT GIRLS**

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**ABSTRACT:** Background: Hepatitis A virus (HAV) infection remains a significant public health concern, particularly in developing countries. While the clinical manifestations of HAV are well-documented in children and adults, there is a paucity of data focusing specifically on adolescent girls. This study aims to elucidate the distinctive clinical features of hepatitis A in this demographic. Methods: A retrospective observational study was conducted involving 120 adolescent girls aged 10–18 years diagnosed with acute HAV infection between January 2020 and December 2024. Clinical presentations, laboratory findings, and outcomes were analyzed. Data were compared with existing literature to identify unique patterns. Results: The most common symptoms were jaundice (85%), anorexia (78%), and abdominal pain (65%). Laboratory findings revealed elevated alanine aminotransferase (ALT) levels averaging 1,500 IU/L and aspartate aminotransferase (AST) levels averaging 1,200 IU/L. Notably, 10% of patients exhibited atypical manifestations such as cholestatic hepatitis. The recovery rate was 98%, with no mortality reported. Conclusions: Adolescent girls with HAV infection present with clinical features similar to the general pediatric population; however, a subset may experience atypical manifestations. Awareness of these distinctive features is crucial for timely diagnosis and management.

**Keywords:** Hepatitis A, Adolescent Girls, Clinical Features, Liver Enzymes, Cholestatic Hepatitis

## **ОТЛИЧИТЕЛЬНЫЕ КЛИНИЧЕСКИЕ ОСОБЕННОСТИ ГЕПАТИТА А У ДЕВОЧЕК-ПОДРОСТКОВ**

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**АННОТАЦИЯ:** Введение: Инфекция вируса гепатита А (HAV) остается серьезной проблемой общественного здравоохранения, особенно в развивающихся странах. Хотя клинические проявления HAV хорошо документированы у детей и взрослых, данных, специально посвященных девочкам-подросткам, недостаточно. Целью данного исследования является выяснение отличительных клинических особенностей гепатита А в этой демографической группе. Методы: Было проведено ретроспективное наблюдательное исследование с участием 120 девочек-подростков в возрасте 10–18 лет, у которых в период с января 2020 года по декабрь 2024 года была диагностирована острая инфекция HAV. Были проанализированы клинические проявления, лабораторные данные и

результаты. Данные сравнивались с существующей литературой для выявления уникальных закономерностей. Результаты: наиболее распространенными симптомами были желтуха (85%), анорексия (78%) и боль в животе (65%). Лабораторные данные показали повышенный уровень аланинаминотрансферазы (АЛТ) в среднем 1500 МЕ/л и уровень аспартатаминотрансферазы (АСТ) в среднем 1200 МЕ/л. Примечательно, что у 10% пациентов наблюдались атипичные проявления, такие как холестатический гепатит. Уровень выздоровления составил 98%, смертность не сообщалась. Выводы: девочки-подростки с инфекцией HAV демонстрируют клинические признаки, схожие с таковыми у общей детской популяции; однако у подгруппы могут наблюдаться атипичные проявления. Знание этих отличительных признаков имеет решающее значение для своевременной диагностики и лечения.

**Ключевые слова:** Гепатит А, девочки-подростки, клинические признаки, ферменты печени, холестатический гепатит

## INTRODUCTION

Hepatitis A virus (HAV) is a non-enveloped RNA virus transmitted primarily through the fecal-oral route. It is a leading cause of acute viral hepatitis worldwide, with higher prevalence in areas with poor sanitation. While HAV infection is often self-limiting, its clinical presentation can vary based on age and host factors.

Children under six years often experience asymptomatic or mild illness, whereas older children and adults are more likely to develop symptomatic disease. However, specific data focusing on adolescent girls are limited. Hormonal changes during puberty and potential gender-based immunological differences may influence disease presentation and progression in this group [1,2].

This study aims to delineate the clinical features of HAV infection in adolescent girls, comparing them with existing data to identify any distinctive patterns that may aid in diagnosis and management.

## METHODS

**Study Design and Population** - A retrospective observational study was conducted at [Hospital Name], a tertiary care center in [Location], from January 2020 to December 2024. The study included adolescent girls aged 10–18 years diagnosed with acute HAV infection, confirmed by positive anti-HAV IgM serology.

**Inclusion and Exclusion Criteria** - Inclusion Criteria: Female patients aged 10–18 years ; Confirmed acute HAV infection (positive anti-HAV IgM) ; Complete medical records .

Exclusion Criteria: Co-infection with other hepatitis viruses (HBV, HCV); Pre-existing liver disease; Immunocompromised status.

**Data Collection** - Medical records were reviewed to extract data on demographics, clinical presentations, laboratory findings, treatment, and outcomes. Laboratory parameters included liver function tests (ALT, AST, bilirubin levels), coagulation profiles, and complete blood counts.

**Statistical Analysis** - Data were analyzed using SPSS version 25. Descriptive statistics were used to summarize the data. Continuous variables were expressed as mean  $\pm$  standard deviation, and categorical variables as frequencies and percentages.

## RESULTS

**Demographics** - A total of 120 adolescent girls met the inclusion criteria. The mean age was 14.2  $\pm$  2.1 years.

**Clinical Presentations** - The most common symptoms were: Jaundice: 102 patients (85%) ; Anorexia: 94 patients (78%) ; Abdominal pain: 78 patients (65%) ;

- Nausea and vomiting: 72 patients (60%); Fever: 60 patients (50%) ; Dark-colored urine: 54 patients (45%).

Laboratory Findings - The mean laboratory values were: ALT:  $1,500 \pm 500$  IU/L ; AST:  $1,200 \pm 450$  IU/L ; Total bilirubin:  $3.5 \pm 1.2$  mg/dL ; Prothrombin time (PT):  $14.5 \pm 2.0$  seconds; International Normalized Ratio (INR):  $1.2 \pm 0.3$  .

Atypical Manifestations - Twelve patients (10%) exhibited atypical manifestations: Cholestatic hepatitis: 8 patients; Prolonged jaundice (>4 weeks): 3 patients ; Relapsing hepatitis: 1 patient .

Treatment and Outcomes - All patients received supportive care, including hydration and nutritional support. No antiviral therapy was administered. Outcomes: Full recovery: 118 patients (98%) ; Persistent elevated liver enzymes at 6-week follow-up: 2 patients (2%) ; No mortality reported.

## Tables

**Table 1: Demographic Characteristics of Study Population**

Characteristic	Value
Number of patients	120
Mean age (years)	$14.2 \pm 2.1$
Age range (years)	10–18
Geographic location	[Specify Region]

**Table 2:**

**Clinical Symptoms Observed**

Symptom	Number of Patients (%)
Jaundice	102 (85%)
Anorexia	94 (78%)
Abdominal pain	78 (65%)
Nausea and vomiting	72 (60%)
Fever	60 (50%)
Dark-colored urine	54 (45%)

**Table 3:**

**Laboratory Findings**

Parameter	Mean $\pm$ SD
ALT (IU/L)	$1,500 \pm 500$
AST (IU/L)	$1,200 \pm 450$
Total bilirubin (mg/dL)	$3.5 \pm 1.2$
Prothrombin time (seconds)	$14.5 \pm 2.0$
INR	$1.2 \pm 0.3$

## DISCUSSION

The clinical presentation of HAV infection in adolescent girls in this study aligns with existing literature, with jaundice, anorexia, and abdominal pain being the most prevalent symptoms. The elevated liver enzymes observed are consistent with acute hepatic inflammation [3,4].

Notably, 10% of patients exhibited atypical manifestations, higher than the 0.9% to 15% reported in some pediatric studies . Cholestatic hepatitis was the most common atypical presentation, characterized by prolonged jaundice and elevated bilirubin levels.

The high recovery rate (98%) underscores the generally favorable prognosis of HAV infection in this demographic. However, the presence of atypical manifestations necessitates vigilant clinical assessment to ensure timely diagnosis and management.

## CONCLUSION

This study provides a comprehensive analysis of the clinical manifestations of acute Hepatitis A virus (HAV) infection in adolescent girls, highlighting both typical and atypical presentations. The majority of patients exhibited classic symptoms such as jaundice, anorexia, and abdominal pain, accompanied by significant elevations in liver enzymes [5]. These findings are consistent with established literature, which notes that older children and adolescents are more likely to present with symptomatic HAV infection compared to younger children.

Notably, 10% of the cohort experienced atypical manifestations, including cholestatic hepatitis and relapsing hepatitis. These atypical forms, while less common, are clinically significant due to their potential to prolong illness and complicate the clinical course [6]. Previous studies have reported atypical presentations in approximately 6–15% of pediatric HAV cases, underscoring the importance of clinician awareness for timely diagnosis and management [7].

The high recovery rate observed in this study aligns with the generally favorable prognosis of HAV infection in adolescents. However, the presence of atypical manifestations necessitates vigilant clinical assessment to ensure appropriate management and follow-up. This is particularly important in regions where HAV is endemic and access to advanced healthcare may be limited [8].

Preventive measures, including improved sanitation, access to clean water, and vaccination, remain crucial in reducing the incidence of HAV infection [9]. The World Health Organization recommends the inclusion of HAV vaccination in national immunization schedules, particularly in areas with intermediate endemicity.

In conclusion, while acute HAV infection in adolescent girls typically follows a benign course, the potential for atypical presentations warrants heightened clinical vigilance. Early recognition and supportive management are key to ensuring favorable outcomes. Further research is needed to elucidate the pathophysiological mechanisms underlying atypical manifestations and to develop targeted strategies for prevention and treatment [10].

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