



A RARE CASE REPORT OF ALBENDAZOLE INDUCED HEPATITIS IN CHILDREN

Paediatrics

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ABSTRACT

Background: Intestinal parasitic infestation is common problem in children, prevalence being 51% in developing countries¹. Albendazole is the most widely used broad-spectrum anti-helminthic drug. Though commonly used in practice, it has some rare, but serious complications. Common adverse effects of Albendazole are nausea, vomiting, constipation, dizziness, and headache. Hepatitis is one of its rare adverse effects. There are very few reports showing Albendazole induced hepatitis, mostly in adults². We hereby report a case of Albendazole induced recurrent hepatitis in a child. **Case Report:** 4 years old girl presented with history of 5 episodes of jaundice in one year with disease free period of 1 month between each episode. She had deranged liver function tests without any evidence of chronic liver disease³. Autoimmune and Viral hepatitis as well as Wilson's disease were ruled out. There was history of ingestion of Tablet Albendazole 400mg before every episode of jaundice. This was empirically given by mother in view of worms in stools. There was no history of ingestion of any alternate medications. Jaundice typically appeared 8-10 days after ingestion of albendazole and resolved over next 2-3 weeks with supportive care, without complications. After evaluation of history and ruling out other causes of recurrent hepatitis, possibility of drug induced hepatitis was considered. Liver biopsy was suggestive of drug induced hepatitis, without any evidence of cirrhosis/ fibrosis. The jaundice did not recur after discontinuing albendazole. The duration of follow up was 1 year. **Conclusions:** There should be awareness regarding cautious use of Albendazole, a drug which is widely used in National Deworming Program. Detailed drug history should be sought in every case of hepatitis. Offending drug should be promptly discontinued.

KEYWORDS

Albendazole, drug induced hepatitis, child.

INTRODUCTION

Intestinal parasitic infection is common problem in children, prevalence being 51% in some recent studies¹. Albendazole is a widely used broad-spectrum anti-helminthic drug. Common adverse effects of albendazole are nausea, vomiting, constipation, dizziness, headache in about 1 in 100 people⁵. Rare side effects (up to 1 in 1000 people) are hypersensitivity reactions including rash, pruritis and urticaria. Few of rare side effects (up to 1 in 10,000 people) are serious blistering skin rashes with swelling and peeling (erythema multiforme, Stevens-Johnsons syndrome). There very are few reports showing albendazole induced hepatitis, mostly in adults⁹. We hereby report a case of Albendazole induced recurrent hepatitis in a child.

CASE STUDY

A 4 year old girl presented with history of icterus. Patient had significant past history of similar complaints and hospitalized 4 times for the same in last one year. On clinical evaluation, she was well nourished, had icterus and soft hepatomegaly (2cm, Span 8cm). She had deranged liver function tests without any evidence chronic liver disease. Viral hepatitis, autoimmune hepatitis, Wilson's disease were ruled out after relevant investigations (refer table no 1). On detail inquiry, there was history of ingestion of tablet Albendazole 400mg before every icteric episode which was over the counter given by mother to her in view of worms in stools. There was no significant history of other drug, except consumption of albendazole. Icterus typically appeared 8-10 days after ingestion of albendazole and resolved over next 2-3 weeks with supportive care, without complications. Liver biopsy showed expansion of portal tract with moderate amount of mononuclear cell infiltrates predominantly biliary passages which were suggestive of drug induced hepatitis. Her CIOMS/RUCAM score was 10. After complete evaluation of history and ruling out other causes of recurrent hepatitis, diagnosis of drug induced hepatitis was made.

DISCUSSION

Previously Morris and Smith have reported abnormalities of liver function tests in seven patients during treatment of 40 patients for Echinococcus granulosus with oral albendazole. Six of these patients had the hepatocellular type of abnormality and one developed an obstructive jaundice. In our case, we observed recurrent drug induced

hepatitis after each dose of albendazole to the child. Albendazole can lead to both hepatotoxic or cholestatic or mixed variety of jaundice, hepatotoxic being more common. Exact mechanism is not known but this can be attributed to hypersensitivity of the patient to benzimidazole group or idiosyncratic reaction due to alteration in CYP enzymes. Most of the patients respond to discontinuation of drug. Few may require short duration of steroids particularly in cholestatic variety. Our patient was managed conservatively. Her CIOMS/RUCAM score was 10 indicating likely diagnosis of drug induced hepatitis. Other common causes of hepatitis should be ruled out before coming to a diagnosis.

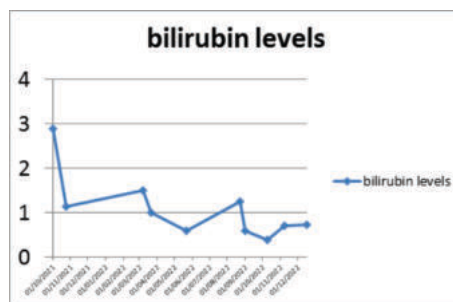


Figure 1: Serial Bilirubin Levels

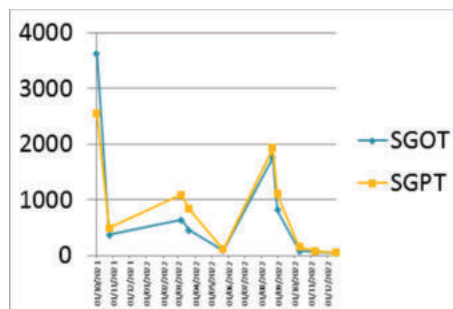


Figure 2: Serial Transaminase Levels

Table No 1: Investigations Which Were Done To Rule Out Other Causes Of Hepatitis.

Test	Results
Anti HAV IgM antibody	negative
Anti HEV IgM antibody	negative
HIV, HBsAg, HCV	negative
ANA	negative
Anti dsDNA	negative
IgG LEVELS	650
Anti LKM	negative
Anti SM	negative
Serum ceruloplasmin	23.8mg/dl
24 hrs urine copper	25.55µ/24 hrs
Dry weight copper in liver	11.5µ/gm
Widal test	negative
KF RING	Absent
Ultrasound abdomen	No significant abnormality detected
Histopathology Of Liver Biopsy	Expansion Of Portal Tract With Moderate Amount Of Mononuclear Cell Infiltrates Predominantly Biliary Passage. Features Suggestive Of Mild Hepatic Injury, Most Likely Drug Induced Hepatitis

Table No 2: Serial Liver Function Test Reports Of Case.

	1/10/21	24/10/21	6/3/22	20/3/22	22/5/22	22/8/22	31/8/22	10/10/22	28/11/22	16/12/22
TP	7.9	7.3	7.2	6.4	6.7	7.9	6.7	7.8	6.7	6.8
Alb	4.4	4.2	4.1	3.4	4.1	4.2	4.0	4.9	3.4	3.7
Sr. bill	2.1	1.14	1.3	1	0.6	1.25	1.04	0.7	0.72	0.70
direct	0.78	0.42	0.56	0.24	0.2	0.8	0.7	0.3	0.30	0.25
SGOT	3611	36.6	669	632	92	1760	685	78	65	38
SGPT	2549	48.8	1088	838	108	1930	998	154	79	45
ALP	165	79.6	198	299	425	652	250	624	452	225
INR	1.1	1.1	1.0	1.0	1.1	1.2	1.16	1.3	1.0	1.1

CONCLUSION

Although, in India tablet Albendazole is widely used in National Deworming program, one should be cautious before prescribing it, considering hepatitis as one of its rare side effect. Detailed drug history should be sought in every case of hepatitis and in case of suspicion; offending drug should be discontinued promptly. Children should be followed up closely to look at trend of liver enzymes as it could be life threatening.

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