Hypopyon with infantile hepatitis A syndrome: A case report

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ABSTRACT
6 year old boy from Yemen was referred to Ophthalmology Department with fever, jaundice and red painful left eye. On examination all signs of anterior uveitis including ciliary injection corneal edema, hypopyon, cells ++ and flare ++ in anterior chamber fine multiple KPs in the back of cornea. He also has swollen painful right ankle joint. The child was admitted to hospital, blood and urine investigations were done to prove that he has hepatitis A. A shot of local steroids on hourly basis was administered before getting the lab results and marked improvement of his iritis and complete disapperance of hypopyon in less than 4 days.

Key words: infantile hepatitis A, hypopyon, juvenile arthritis, HAV (hepatitis A virus), viral iritis

INTRODUCTION
Hepatitis A infection is a liver disease caused by the hepatitis A virus. The virus is primarily spread when an uninfected (and unvaccinated) person ingests food or water that is contaminated with the faeces of an infected person. The disease is closely associated with a lack of safe water, inadequate sanitation and poor personal hygiene. Every year there are an estimated 1.4 million cases of hepatitis A worldwide. The hepatitis A virus is one of the most frequent causes of food-borne infection. HAV – viral replication occurs in the liver, leading to hepatic injury1. The entire liver exhibits necrosis as well as increased cellularity in the portal areas.

In developing countries with very poor sanitary conditions and hygienic practices, most children (90%) have been infected with hepatitis A virus before the age of 10 years2. Those infected in childhood do not experience any noticeable symptoms. In countries with transitional economies, and regions where sanitary conditions are variable, children often escape infection in early childhood. Ironically, these improved economic and sanitary conditions may lead to a higher susceptibility in older age groups and higher disease rates, as infections occur in adolescents and adults, and large outbreaks can occur. In developed countries with good sanitary and hygienic conditions, infection rates are low. Disease may occur among adolescents and adults in high-risk groups, such as injecting-drug users, homosexual men, people traveling to areas of high endemicity, and in isolated populations such as closed religious communities.

Infants and young children infected with hepatitis A virus will rarely show symptoms of infection and may appear quite well, or have only mild symptoms. The majority of adults will show symptoms such as fever, nausea, weakness, joint aches and pains, fatigue, vomiting, loss of appetite, and jaundice3.

One of the ophthalmic complications associated with this infection is hypopyon. The presence of pus in the anterior chamber of the eye that produces cloudiness or a colour changes in the cornea. Two main factors which predispose to development of hypopyon are the virulence of the infecting organism and the resistance of the tissues4.

Mechanism of the development of hypopyon is iritis especially if severe (diffusion of the toxins from the corneal...
that vision was much affected in right eye (less than 6/60). Slit Lamp examination showed marked photophobia, conjunctival and ciliary infection. Cornea hazy, edematous and its back surface in the upper part show multiple fine KP’s. Anterior chamber show dirty white hypopyon more than one third the corneal vertical diameter with straight level. Upper part show flare ++ and cells ++++. The pupil was severely constricted. Fundus details were impossible to be seen because of the constricted pupil and the hypopyon. The right eye was normal with normal fundus view and normal vision. Lab investigations CBC, CRP, ST, LFT, urine examination, was ordered in the same day to diagnose the type of hepatitis.

Ophthalmological treatment was started in the same day with topical steroids and cycloplegics, no systemic steroids was advised, appointment was given after 2 days to examine his fundus after the effect of the cycloplegic open the miotic pupil. After 2 days follow up was done for fundus examination. It was a big surprise that all signs of inflammation were gone. The eye was quiet without injection. The cornea is clear and KP’s disappeared. The hypopyon, cells and flare disappeared completely. The pupil was dilated and fundus examination was completely normal. Lab results came in the same day to prove that the patient was positive to hepatitis A. We started to withdraw the topical steroids gradually which was given on hourly basis, and we follow him for the next few days. Their also a very rapid and good response to treatment for his ankle joint and he recovered in few days also, for his hepatitis he got bed rest, no specific treatment was given but he recovered within few days and discharged from hospital.

DISCUSSION
This 6 years boy came from Yemen for treatment of hepatitis A which was transmitted to him in Yemen from his brother who has the same disease. But unfortunately he started to have a
sort of viral uveitis in his left eye which progressed to the stage of having sterile hypopyon. The patient was diagnosed as a case of infantile hepatitis A. Treatment of his Lt eye uveitis started from the 1st day with local steroids on hourly basis, which resulted in a rapid and good response in halting his inflammatory process. Also his hepatitis was improved in a very short period less than one week by rest in bed. The hallmark of acute anterior uveitis is the presence of inflammatory cells and proteinaceous flare in the anterior chamber of the eye. Symptoms include pain, photophobia, & blurred vision in the involved eye. Iridocyclitis may be a part of a more generalized autoimmune & endogenous uveitis like in cases of Reiter’s Syndrom, more commonly observed in patients with HIV infection. An association was already established between autoimmune hepatitis & uveitis. Viral infections can cause uveitis. Toxoplasmosis is generally the most common cause of infective uveitis. The aetiology of acute anterior uveitis in the great majority of cases is unclear. Various infective agents have been postulated, however as playing a direct or indirect part in the disease process, possibly via an immune – complex vasculitis. In this boy patient from the clinical picture of his uveitis and from the shape of the KP’s it looked to us that it was a sort of viral uveitis. The severity of the condition as evidenced by the presence of hypopyon was due to the sever immunological reaction in this cases, and due to bad general condition, and low resistance. A good response to local steroidal treatment without any specific antiviral medication indicate that, the underlying cause for this hypopyon was an autoimmune process.

REFERENCE