Assessment of Biliary Patency Following Kasai Portoentrostomy by Hepatobiliary Scintigraphy (HIDA) -Initial Experience

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Introduction

Biliary atresia is a hepatic disorder that occurs usually in neonates.In biliary atresia there is blockage in the ducts that carry bile from the liver to gallbladder. This congenital anomaly occurs when the bile ducts inside or outside the liver do not develop normally, which ultimately causes cirrhosis and liver failure if not diagnosed and treated in early stage. Early detection of this disease is fundamental for early surgery and better prognosis. Biliary atresia is being managed in two stages; the first stage involves the Kasai operation; If bile flow is not restored by Kasai procedure liver transplantation as a second stage. The procedure is named Kasai portoenterostomy, in which a Roux-en-Y loop of jejunum is anastomosed to the hepatic end of the divided extravascular portal structures, including rudimentary bile ducts. HIDA scan is a valuable test for evaluation of Kasai operation, either the operation is successful or not.

Materials & Methods

A total of 6 patients were referred to NINMAS for HIDA scan during last 6 months of current year. All of them underwent Kasai operation for correction of biliary atresia. HIDA scan was done following the standard protocol. Here we presented six cases came at NINMAS for doing HIDA scan after kasai operation. These patients came both before and after Kasai operation. Out of 6 patients (4 /2 M/F) & their mean age was 12.5 ± 55 months. Each patient was injected 2.5 mCi Tc 99m HIDA. Static images were taken 5 minutes interval for 30 minutes. If bowel activity was not seen after 30 minutes then 2 ,4 & 24 hours images were taken . After HIDA scan, bowel activity was seen within 30 minutes in 5 patients. One patient showed bowel activity in two hours view.

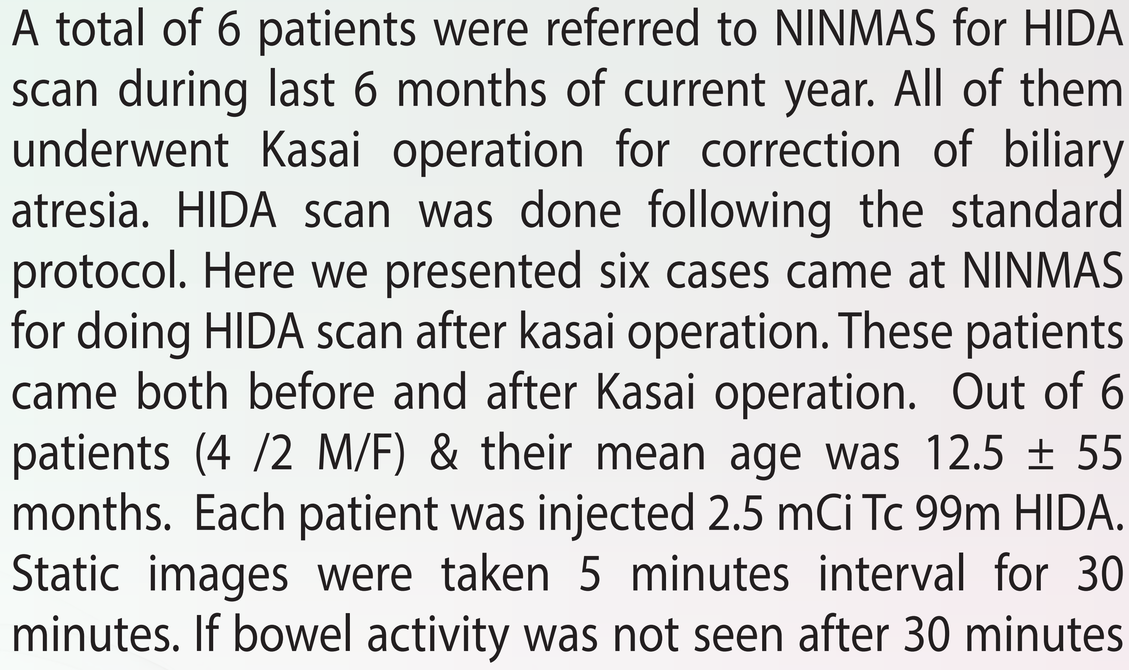

Figure1: Positive HIDA scan before operation

Table 1: showing summery of six patients

Case no.	Age & Sex	Clinical History	USG Findings & Biopsy	HIDA Finding before operation	HIDA Finding after operation
1	6M (M)	Neonatal jaundice Bilirubin is high.	Contracted GB & IHB tree was not dilated. Biopsy- Extra hepatic cholestasis	Positive	Negative
2	1M(M)	Neonatal jaundice Bilirubin is high	GB is not visualize-d, Biopsy BA-	Positive	Negative
3	3Y(F)	Same	Same	Positive	Negative
4	1Y(M)	Same with ascites	Same	Positive	Negative
5	5M(M)	Yellow colour stool & dark colour urine. Bilirubin is high.	Gb Contracred, B- BA	Positive	Negative
6	6M(F)	Same	GB was not visualized, B-BA	Positive	Negative

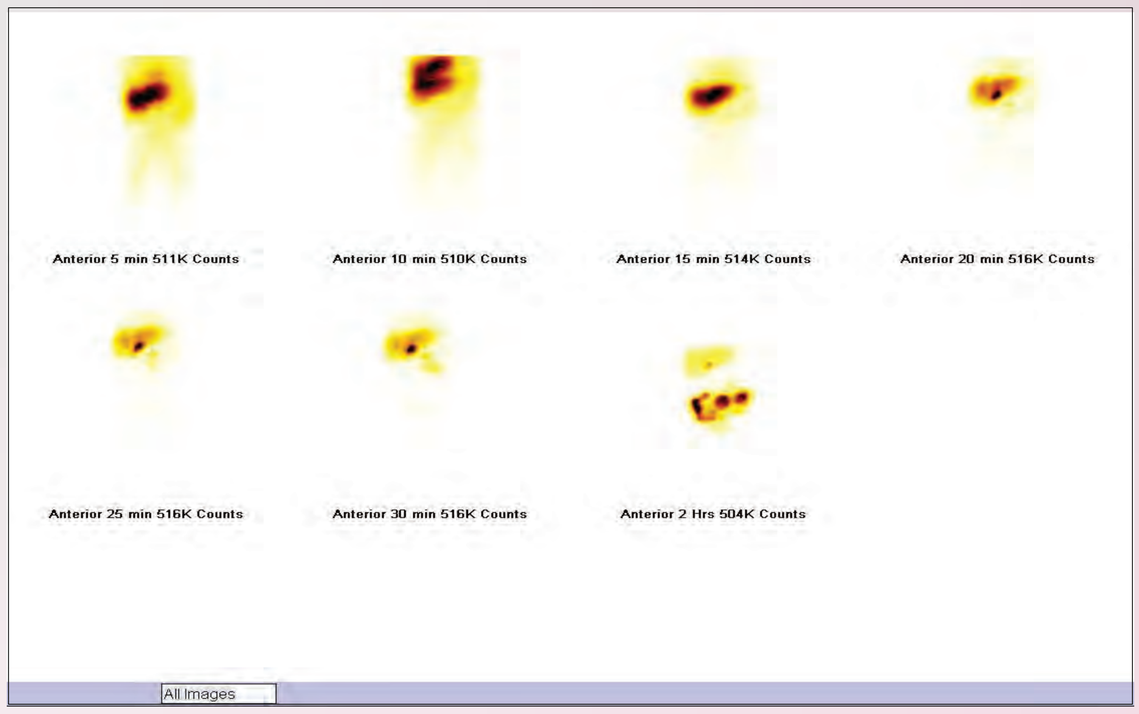

Figure 2: Negative HIDA scan after operation

Results

Out of 6 patients (4 /2 M/F) & their mean age was 12.5 ± 55 months. After HIDA scan, bowel activity was seen within 30 minutes in 5 patients. One patient showed bowel activity in two hours view. All pateints were positive before kasai operation & negative after operation in HIDA scan

Conclusions

HIDA scan is a good procedure to assess biliary patency following KASAI operation for biliary atresia.

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