



Liver biopsy in children: A single centre tertiary care experience

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1. Background

Liver biopsy is still the criterion standard procedure for obtaining liver tissue for histopathological examination and a valuable tool in diagnosis, prognosis and management of many parenchymal liver diseases in children.

1.1. Aim

To analyse the liver biopsies in children in our hospital in terms of adherence to procedure related protocols, indication, diagnosis, procedure related complications.

1.2. Methods

- Retrospective analysis
- Nov 2022–Nov 2024
- KCN and Maa Kauvery women & children's hospital
- Indication-neonatal cholestasis, unexplained hepatomegaly, anicteric hepatitis, chronic liver disease.

1.3. Pre procedure

- Every child requiring biopsy was admitted
- Basic investigations - CBC, PT/INR, and serology was done
- Contraindication – HB < 8g/ dl, platelet count < 60,000, INR > 1.5
- USG abdomen to rule out anatomical variation of liver was done.

2. Procedure

- Under iv sedation in OT
- After adequate sterilization and local anesthesia
- Using 18G × 10 cm biopsy gun, either sub costal or inter costal approach, blind biopsy was done

Citation: Rakesh Manohar. Liver biopsy in children: A single centre tertiary care experience. *Kauverian Med J*, 2025;2(4):13-15.

Academic Editor: Dr. Venkita S. Suresh

ISSN: 2584-1572 (Online)



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- 1-2 passes made, depending on size of sample procured and transferred in a formalin container.

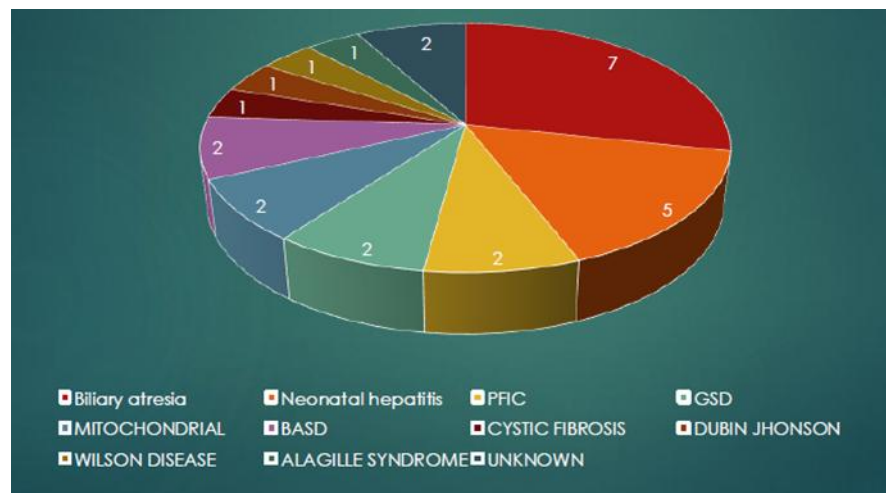
2.2. Post procedure

- HR, SPO2 monitored continuously in post op for 6 hr
- RR, BP and temperature monitored every 1 hour for 6 hr in post op
- NPO for minimum 2 hr
- Pain management with oral paracetamol for 24 hr
- Routing USG abdomen screening within 4 hrs of procedure to look for bleeding.

2.3. Data

- Total no of LB-26
- Mean age-1.5 years (1 month to 12 years)
- Complication during procedure-2-instrument failure, lung biopsy
- Mean hospital stay - 1.5 days
- Final diagnosis arrived with help of LB-25.

3. Diagnosis



4. ESPGHAN guidelines-blind liver biopsy

- Hb > 8g/dl
- Platelets->60000
- INR < 1.5
- USG abdomen to rule out anatomical variation

- Right intercostal approach if liver not palpable-1 intercostal space below the superior margin of liver in right mid axillary line
- For a big liver, subcostal approach at MCL.

5. Conclusion

- Blind liver biopsy is a safe procedure with usage of automated biopsy gun when the pre requisites and site of needle entry are adhered properly.
- 60% of complications occur within first 2 hr after procedure and 96% within 24 hr.
- The common complications are pain, bleeding (2.8%), AV fistula, pneumothorax, hemothorax, hemobilia, infection.
- However, the advanced biopsy gun has reduced the overall complications.