Our Experience of 104 Patients with Liver Masses: A Study from Tertiary Care Hospital

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Background and Aims

Third most common intra-abdominal malignancy in children, after neuroblastoma and Wilms' tumor.

Two-thirds of liver tumors in children are malignant - Hepatoblastoma being the most frequent histological subtype.

Aim

To present our institutional experience in the diagnosis, surgical management, and outcome of pediatric liver tumors.

Methods

Retrospective study included 104 children who underwent surgical intervention for liver masses between 2007 and 2024.

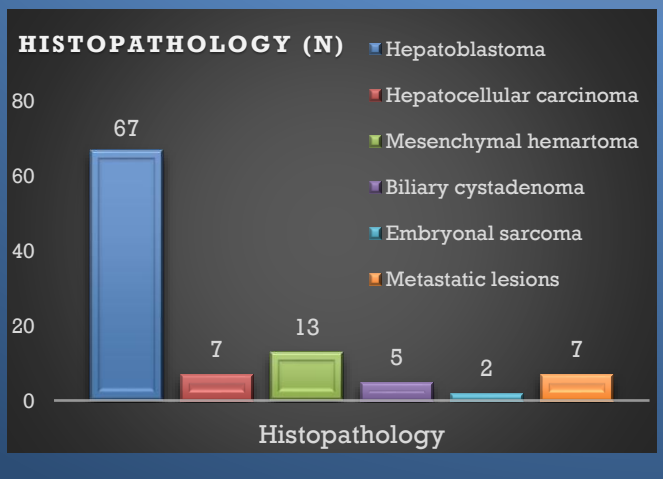
Data reviewed regarding demographics, presentation, workup, histopathology, chemotherapy, surgical procedures, complications, and final outcomes.

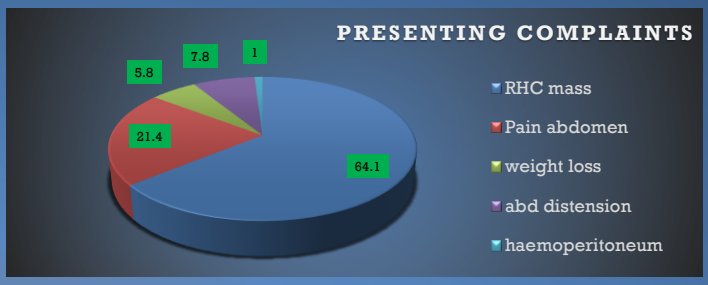
All patients underwent ultrasound-guided biopsy. Malignant cases were treated with neoadjuvant chemotherapy followed by surgical resection using harmonic scalpel and LigaSure.

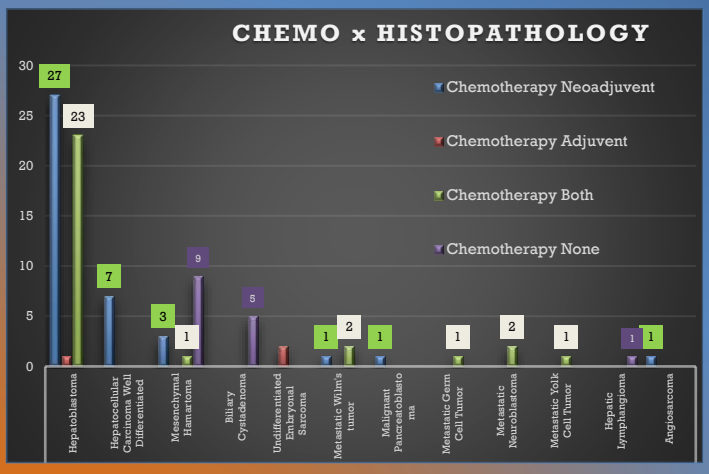
Results

Total children	104 Patients
Mean age at follow-up	40.09 ± 0.75 months.
Male to female ratio	1.67:1
Mean follow-up duration	42.84 ± 48.40 months

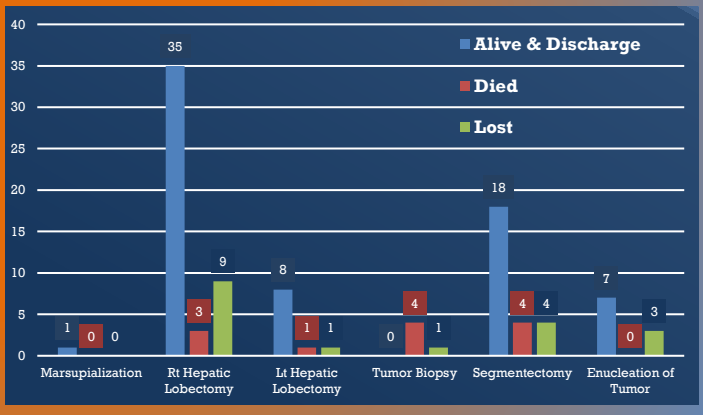
- Common Presentation: Right hypochondrial mass (63.5%) and abdominal pain (21.2%) were the most common presenting symptoms.
- Right hepatic lobectomy was the most performed surgery (42.3%) with resection of involved segments 5, 6, 7 and 8 in 39.4% followed by Left lateral segmentectomy (14.4%).
- Chemotherapy (pre and post) was administered in 44.2% of malignant cases.
- Postoperative complications occurred in 23%, including recurrence (25%) and liver failure (7.5%).
- Outcome: 58.7% of patients were discharged alive, 15.4% died, and 17.3% were lost to follow-up.







Post-op Complications n = 40 Patients	Percentage
Recurrence (10)	25
Intestinal Obstruction (4)	10
Subphrenic Abscess (3)	7
Liver Failure (3) Extreme Resections	7.5
Portal vein Thrombosis (1)	2.5
Wound Infection (1)	2.5



Conclusion

- Low survival (58.7%), high mortality (15.4%) and lost to follow-up (17.3%) are discouraging. These figures remain lower than survival rates reported in high-income settings (70–80%) but are comparable to outcomes from other resource-limited regions.
- Nearly one in six patients (17.3 %) disappeared from surveillance, which limits long-term outcome evaluation and may mask additional mortality or recurrence.
- Delayed presentation, advanced disease at diagnosis, and incomplete follow-up remain the major determinants of poor outcome.
- Strengthening early detection, patient navigation, and follow-up systems is essential to improve survival in pediatric liver tumors in developing countries.

References

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