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Treatment options and surgical management of non-parasitic spleen cysts in children: A Single-Centre Experience

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Aim

This study aims to evaluate the non-infectious (non-parasitic) splenic cyst cases observed in our clinic and to compare our results with recent reports in the literature.

Methods

Between 2019 and 2025, we retrospectively analyzed non-parasitic splenic cyst cases, focusing on demographic data, clinical symptoms, follow-up periods, radiological findings, surgical techniques, postoperative complications, and pathological results.

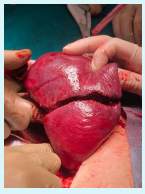
- Group 1: Non-operatively Managed Patients
- Group 2: Surgically Treated Patients

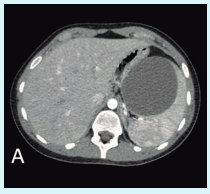
Vaccination was completed three weeks before surgery for all operated patients.

	GROUP 1 (n:58)	GROUP 2 (n:12)	P
AGE (YEAR)	8.4 ±5.9	13.1 ±3.5	**0.01**
GENDER (n,%)			
Girl	32 (%55.1)	3 (%25)	0.11
Boy	26 (%44.9)	9 (%75)	
SYMPTOMS (n,%)			
Incidentally	55 (%94.9)	10 (%83.4)	0.42
Abdominal Pain	3 (%5.1)	2 (%16.6)	
LOCATION (n,%)			
Upper Pole	25 (%43.2)	8 (%66.6)	0.173
Middle Pole	22 (%37.9)	4 (%33.4)	
Lower Pole	11 (%18.9)	-	
CYST SIZE (mm)	21.1± 17.9	94.33± 32.45	**0.001**
FOLLOW – UP DURATION (MONTH) (min-max)	9.8 (6-60)	10.3 (6-24)	

Results

- Operated patients were found to be older.
- There was no significant gender difference between the two groups.
- In both groups, most cysts were detected incidentally.
- Cysts were predominantly located in the upper pole of the spleen.
- The cyst size was significantly larger in the operated group.
- The follow-up duration was similar in both groups.





CYST SIZE / SPLEEN SIZE (%)		
Splenectomy (n:6)	%80,17 ± 5,34	p=0.002
Partıal Splenectomy (n:6)	%57 ± 8,25	
RECURRENCE (n,%)		
Aspıratıon / Partıal Cystectomy	5 (%100)	(1/4)
Partıal Splenectomy	0	
PATHOLOGY (n,%)		
Epithelial Cyst	10 (%83,3)	
Mesothelial Cyst	2 (%16,7)	

Results

- In the splenectomy group, the cyst-to-spleen size ratio was approximately 80%.
- In the partial splenectomy group, the cyst-to-spleen size ratio was 57%.
- All patients who has cyst aspiration or partial cyst excision (two of which were performed laparoscopically in our clinic) experienced recurrence. All of these patients later had partial splenectomy (Three of them were operated on at other centers, while two were operated on in our clinic.).
- The pathological diagnosis was epithelial cyst in 83.3% of the patients, in line with the literatüre

Discussion

- In most studies in the literature, follow-up is recommended for cysts smaller than 5 cm, while surgical treatment is advised for cysts larger than 5 cm or those that are symptomatic.
- Similarly, in our study, the mean cyst size in surgically treated patients was 9 cm.
- All patients who had cyst aspiration or partial cyst excision experienced recurrence.
- In cases where the residual splenic tissue was sufficient, partial splenectomy was safely performed, as also reported in the literature.
- There is no clear agreement on the optimal management of non-parasitic splenic cysts.

Conclusion

- In symptomatic cases, the treatment plan is determined by the size and location of the cyst.
- In surgical management, partial splenectomy should be preferred in suitable cases as an effective, safe, and spleen-preserving method.