A Review of the treatment of splenic cysts at Children's Medical Center

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Introduction

- Non-parasitic splenic cysts are relatively infrequent
- The management of non-parasitic splenic cysts in children is unclear
- Options include observation, partial or total splenectomy and rarely percutaneous aspiration and sclerotherapy
- At Children's Medical Center (CMC), aspiration and sclerotherapy has been used as an effective alternative therapy with decreased risk
- The aim of this study is to assess the outcomes of these interventions
- Low numbers make it difficult to compare patients and assess the efficacy of these treatment modalities

Materials & Methods

- Retrospective review of patients <18 years with splenic cysts (2009-2016) at a major children's hospital was performed after IRB approval
- Data Collected:
  - Demographics
  - Mode of intervention
  - Outcome data
- Due to the small numbers, statistical analysis was limited

Table 1. Details of the Intervention Group

Patient	Age (y)	Cyst Size (cm)*	Management	Recurrence	Size @Recurrence*	Treatment of recurrence	Complications
A	14	1.0 - 3.6	1 sclerotherapy with Alcohol	Yes	1.5	N/A	No
B	15	2.8	2 drain, 1 sclerotherapy w/ Doxy	Yes	2.2	Observation	No
C	8	10 - 10.3	4 sclerotherapy	Yes	3.2	Observation	No
D	12	17	5 sclerotherapy	Yes	4.1	Observation	Yes
E	18	17	3 sclerotherapy (3 rounds with doxy)	Yes	8.2	robotic laparoscopic splenic cystectomy	No
F	10	19 - 20	1 drainage	Yes	15	laparoscopic cystectomy	No
G	15	multiple, largest 10	Open Complete Splenectomy	No	N/A	N/A	No
H	16	22	Open Complete Splenectomy	No	N/A	N/A	No
I	14	10 - 10.2	Laparoscopic Complete Splenectomy	No	N/A	N/A	No
J	16	7.5 - 9.4	Laparoscopic Cystectomy	No	N/A	N/A	No
K	14	13.6	Laparoscopic Partial Splenectomy	No f /u	N/A	N/A	No
L	11	17 - 18.8	Laparoscopic Partial Splenectomy and Total Cystectomy	Yes	2.4	N/A	No

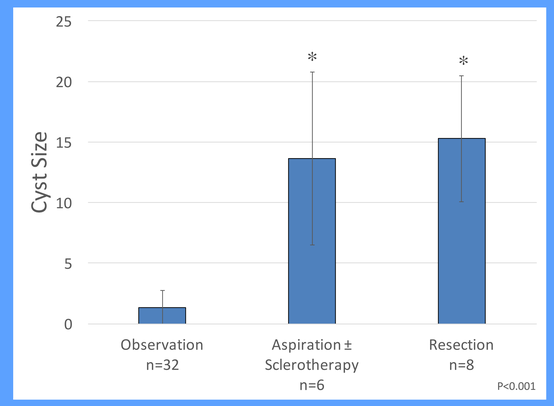
*measured on CT, US or MRI imaging with the largest dimension reported

Table 2. Splenic cyst patients data summary

	Observation n=32	Aspiration ± Sclerotherapy* n=6	Resection** n=8
Age of Presentation (y)			
median ± SD	4.64 ± 7.04	13.47 ± 3.71	14.86 ± 2.77
Size (cm)			
median ± SD	1.3 ± 1.47	13.65 ± 7.16	15.3 ± 5.20
Gender			
female	18	2	5
male	14	4	3
Outcomes			
1° intervention failure	2	4	0

*Data for aspiration ± sclerotherapy include the two patients who failed observation
**Data for resection include the two patients who failed aspiration ± sclerotherapy

Figure 1. Cyst Size



Conclusions

- Observation of splenic cysts is an appropriate management strategy for small asymptomatic splenic cysts
- Percutaneous aspiration and sclerotherapy is associated with a higher rate of recurrence
- Surgical resection is associated with lowest recurrence rates and should be considered for patients with large or symptomatic cysts

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