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Institutional Experience with Primary Interventional Radiology Sclerotherapy for Lymphatic Malformation

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Title

Institutional Experience with Primary Interventional Radiology Sclerotherapy for Lymphatic Malformation

Obiyo Osuchukwu, MD MPH, Brenton Reading, MD, Charlene Dekonenko, MD, Wendy Jo Svetanoff, MD MPH, Jeff Thekkekara, Douglas C. Rivard, DO, Charles L. Snyder, MD, Tolulope A. Oyetunji, MD

Introduction

- Lymphatic Malformations (LMs) are traditionally treated by surgical resection
- But surgical resection is associated with high recurrence and morbidity
- On the other hand, percutaneous sclerotherapy (SCT) performed by interventional radiology (IR) is less invasive and is fast replacing surgery as the preferred method of treatment.
- Aim: To examine our institutional experience with primary IR SCT for treatment of LMs

Methods

- Retrospective Chart Review: Children < 17 years; Underwent primary IR SCT for treatment of LMs; From Jan 2011 to Dec 2019
- Exclusion: Patients who underwent surgical or laser treatment

Results

- Retroperitoneal LMs or multiple locations of LM required multiple SCT treatments compared to LMs located in the head/neck, trunk/axilla or extremities.
- LMs who required multiple treatments had a median volume of 123.4 cm³ (IQR 42.4, 306) compared to those who underwent a single treatment [36.5 cm³, (IQR, 17.6, 64.8)]
- There was no difference in morphology, anatomic location, volume, number of treatments or number of sclerosants on recurrence of LMs

Discussion

- IR SCT is effective as a primary treatment of LM as well as treatment for recurrent cases
- Majority of cases require only one SCT treatment session, however LMs with larger volume may require multiple treatment sessions.

Interventional Radiology Sclerotherapy is effective for treatment of primary and recurrent lymphatic malformations



Graphs and Figures

Patient Characteristics	Median [IQR] or Frequency (%) N=85
Sex	
Male	50 (58.8)
Age (years)	1.6 [0.3, 5.2]
Anatomic Location	
Head & Neck	51 (60.0)
Extremities	11 (12.9)
Trunk/Axilla	10 (11.8)
Retroperitoneum	5 (5.9)
> One location	8 (9.4)
Outcomes	Median [IQR] or Frequency (%) N=85
Outcomes # of treatments	Median [IQR] or Frequency (%) N=85
Outcomes # of treatments 1	Median [IQR] or Frequency (%) N=85 66 (77.7)
# of treatments 1 > Or = 2	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3)
# of treatments 1 > Or = 2 # of Sclerosants	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3)
# of treatments 1 > Or = 2 # of Sclerosants 1	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3) 43 (50.6)
# of treatments 1 > Or = 2 # of Sclerosants 1 > Or = 2	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3) 43 (50.6) 42 (49.4)
# of treatments 1 > Or = 2 # of Sclerosants 1 > Or = 2 # of recurrence	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3) 43 (50.6) 42 (49.4) 55
# of treatments 1 > Or = 2 # of Sclerosants 1 > Or = 2 # of recurrence Recurrence per patient	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3) 43 (50.6) 42 (49.4) 55 2 [IQR 1, 2]
# of treatments 1 > Or = 2 # of Sclerosants 1 > Or = 2 # of recurrence Recurrence per patient Treatment for recurrence	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3) 43 (50.6) 42 (49.4) 55 2 [IQR 1, 2]
# of treatments 1 > Or = 2 # of Sclerosants 1 > Or = 2 # of recurrence Recurrence per patient Treatment for recurrence Sclerotherapy	Median [IQR] or Frequency (%) N=85 66 (77.7) 19 (22.3) 43 (50.6) 42 (49.4) 55 2 [IQR 1, 2] 50 (90.9)

