A 6-month-old febrile infant presented with MRSA pneumonia, multiple neck and anterior mediastinal abscesses, and Lemierre’s syndrome.

Imaging Findings:

A six-month-old African American female patient was admitted to the emergency department and subsequently to the paediatric intensive care unit for respiratory distress and swelling of the left side of the neck. She was diagnosed with respiratory syncytial virus bronchiolitis two days prior to admission. The day of admission she had fever and difficulty moving her neck. On examination she was febrile, irritable, and the neck was swollen and tender. She was tachypneic and had substernal retractions. A pericardial friction rub was heard on auscultation. A neck CT examination showed multiple neck abscesses, in the retropharyngeal space and left lateral neck, with an anterior mediastinal phlegmon. Left internal jugular vein thrombosis was present (Fig. 1). Chest radiograph demonstrated patchy airspace disease and round pneumonia in the right upper lobe.

Discussion:

Neck abscesses can be complicated and multifocal and may spread quickly via the deep cervical fascia to other areas, to include the skull base, chest, and mediastinum. Additionally, Lemierre’s syndrome, septic thrombophlebitis of the internal jugular vein, is a rare but serious complication of neck abscesses or mouth infections. While many abscesses have been previously treated surgically, surgical drainage is difficult due to the presence of prominent nerves and blood vessels in the neck and mediastinum. [1] Even though this modality has been utilised extensively when treating neck abscesses in adults, [1] we believe this is the first time this procedure has been used to drain neck and mediastinal abscesses in children. In experienced hands, the procedure is safe, precise, and effective in treating abscesses and its complications.

Real-time, high-resolution ultrasound guidance provides millimetre accuracy and control, allowing interventional radiologists the ability to avoid critical structures in the neck and chest. The un-ossified sternum of infants and
In experienced hands, percutaneous drainage of complicated neck and mediastinal abscesses are safe procedures, avoiding extensive surgical intervention, and now provides paediatric specialists effective options for care of children with complicated neck and chest infections.

**Differential Diagnosis List:** MRSA pneumonia, multiple neck and anterior mediastinal abscesses, Lemierre’s syndrome, MRSA pneumonia, Complicated neck abscesses, Complicated mediastinal abscesses, Lemierre’s syndrome

**Final Diagnosis:** MRSA pneumonia, multiple neck and anterior mediastinal abscesses, Lemierre’s syndrome

**References:**


Figure 1

Description: CT image of the neck demonstrates the retropharyngeal (straight arrow) and lateral neck abscesses, as well as thrombosed left internal jugular vein (curved arrow). 

Origin: Shiels W, Department of Radiology, Nationwide Children's Hospital, Columbus, Ohio, USA
Description: Ultrasound guidance image demonstrates the 21G needle and .018-inch guidewire (arrow) crossing from left to right in the retropharyngeal abscess behind the right carotid artery (curved arrow). Origin: Shiels W, Department of Radiology, Nationwide Children’s Hospital, Columbus, Ohio, United States.
Description: Fluoroscopic image demonstrates two 6F drainage catheters in place in the retropharyngeal and lateral neck abscesses. Origin: Shiels W, Department of Radiology, Nationwide Children’s Hospital, Columbus, Ohio, United States
**Figure 3**

**a**

**Description:** CT image demonstrates the pericardial abscess (arrow) anterior to the right atrium.

**Origin:** Shiels W, Department of Radiology, Nationwide Children’s Hospital, Columbus, Ohio, United States

**b**

**Description:** Ultrasound image demonstrates the 21G needle (arrow) being directed from left to right beneath the cartilaginous portion of the sternum (curved arrow) into the pericardial abscess (arrowhead).

**Origin:** Shiels W, Department of Radiology, Nationwide Children’s Hospital, Columbus, Ohio, United States
Description: Fluoroscopic image demonstrates the drainage catheter in the pericardial abscess during the drainage and lavage procedure. Origin: Shiels W, Department of Radiology, Nationwide Children's Hospital, Columbus, Ohio, United States.
**Figure 4**

*Description:* CT image demonstrates abscess in the anterior neck (arrows). *Origin:* Shiels W, Department of Radiology, Nationwide Children's Hospital, Columbus, Ohio, United States
Description: Parapharyngeal abscess (arrow). Origin: Shiels W, Department of Radiology, Nationwide Children's Hospital, Columbus, Ohio, United States
Description: Abscess in the anterior mediastinum (arrow). Origin: Shiels W, Department of Radiology, Nationwide Children's Hospital, Columbus, Ohio, United States
Description: CT image demonstrating anterior mediastinal abscess drain (arrows) in place following a retrosternal course anterior to the aortic arch. Origin: Shiels W, Department of Radiology, Nationwide Children's Hospital, Columbus, Ohio, United States.
Description: Fluoroscopic image demonstrates drainage catheters and contrast in both the anterior neck and anterior mediastinal abscesses. Origin: Shiels W, Department of Radiology, Nationwide Children’s Hospital, Columbus, Ohio, United States