INTRODUCTION

A 45-year-old man presented to the Veterans Administration Medical Center-Memphis and was evaluated as an inpatient by the Department of Otolaryngology. He reported fever, painful right neck swelling and trismus on the fifth day of his illness. His neck examination was normal. Contralateral vocal cords were noted to move symmetrically with inspiration and expiration. Magnetic Resonance Imaging of the neck was performed and showed a lack of contrast in the vein above the angle of mandible. Reconstructed images in sagittal and axial CT images failed to show hypo dense vein. The patient was febrile and white cell count was elevated. Contrast enhanced CT ruled out a deep neck abscess on the lateral soft tissue plane and no evidence of neck pathology including thrombus in the IJV or an abscess. The patient was admitted for further evaluation.

BACKGROUND

Lemierre syndrome is a rare but potential life threatening condition with high mortality rate of 5%-18%. Diagnosis is made by the radiologic findings of thrombosis in the internal jugular vein (IJV) or subclavian vein, or both with evidence of oropharyngeal infection or cervical abscess. Traditionally, contrast enhanced CT neck or Doppler ultrasound of IJV are the imaging studies of choice in the diagnosis of LS. Contrast CT chest can be added if patient has signs suggestive of septic thrombophlebitis of the ipsilateral lung or peritoneum. IJV thrombosis / thrombophlebitis results from adjacent inflammatory process or extension from tonsillar veins. Septic emboli circulate in the blood and cause septicemia or metastatic abscesses. Its lipopolysaccharide endotoxin is capable of causing an intense systemic sepsis.

Most cases present with a classic progressive trial involving no infective thrombophlebitis, IJV thrombosis and evidence of Fusobacterium necrophorum, the pathogen involved in most cases (81%). Other pathogens can cause LS including other fusobacterium species, streptococci, and group A, B and C streptococci. Community acquired methicillin resistant staphylococcus aureus has also been reported. Fusobacterium necrophorum is an anaerobic gram negative organism which is part of the normal oral flora. It has also been implicated as a primary or without the presence of a meaningful underlying disease. Recent studies have linked LS with systemic symptoms such as severe headache, and an intense systemic sepsis. Infection of the parapharyngeal space occurs as a result of direct spread by lymphatic or venous dissemination. IJV thrombosis / thrombophlebitis results from adjacent inflammatory process or extension from tonsillar veins. Septic emboli circulate in the blood and cause septicemia or metastatic abscesses. As in our case report, multi-planar reconstruction of CT images can be used to demonstrate the IJV from the jugular foramen to the angle of the mandible with the concept of thrombus extent and relationship to adjacent structures, particularly major blood vessels, thus avoiding any additional imaging to diagnose IJV thrombosis.

METHOD:

This case report describes the clinical presentation and management of LS with emphasis on imaging and surgical treatment. The authors present a case of LS in a young man with fever, right neck swelling, and trismus.

CASE REPORT

A 45-year-old man presented to the Veterans Administration Medical Center-Memphis and was evaluated as an inpatient by the Department of Otolaryngology. The patient had a history of diabetes and was admitted for further evaluation. He developed fever, painful right neck swelling and trismus on the fifth day of his illness. His neck examination was normal. Magnetic Resonance Imaging of the neck was performed and showed a lack of contrast in the vein above the angle of mandible. Reconstructed images in sagittal and axial CT images failed to show hypo dense vein. The patient was febrile and white cell count was elevated. Contrast enhanced CT ruled out a deep neck abscess on the lateral soft tissue plane and no evidence of neck pathology including thrombus in the IJV or an abscess. The patient was admitted for further evaluation.

DISCUSSION

Contrast enhanced CT scan is the imaging study of choice to assess for neck pathology including thrombosis in the IJV or an abscess. The use of multiplanar reconstruction of conventional contrast CT images (140) has been advocated for the evaluation of LS and allows for the assessment of both IJV and subclavian veins as well as the IJV from the jugular foramen to the angle of the mandible with the concept of thrombus extent and relationship to adjacent structures, particularly major blood vessels, thus avoiding any additional imaging to diagnose IJV thrombosis.

REFERENCES