

Summary

Anatomy:

Superior vena cava is located in tight compartment in the superior mediastinum, immediately adjacent and anterior to trachea and right main stem bronchus. Significant extrinsic pressure, impingement, encasement, or a dual invasion of superior vena cava causing an obstruction of venous return from head, neck and upper extremities leads to unmistakable signs and symptoms. (4),(5)

Etiology:

Malignancy accounts for most of all superior vena cava obstructions. Lung cancer is the most common cause of superior vena cava obstruction. Mediastinal lymphoma, mediastinal thymoma and germ cell tumours are another examples. (23), (24), (25).

Also there are many non-malignant causes of SVCS which include: bronchogenic cysts, aortic pseudoaneurysm, subclavian vena cava stenosis, pericardial hematoma, histoplasmosis species, blastomycosis, filarial adenopathy, septic thrombi tuberculous mediastinitis, pacemaker leads, central venous catheter peritoneovenous shunt, transvenous electrode,

substernal goiter, intravascular papillary endothelial hyperplasia, angioimmunoblastic lymphadenopathy, systemic lupus erythematosus, sarcoidosis, Behcet's disease (vasculitis), radiation fibrosis, idiopathic thrombosis (46), (47), (48), (49), (50), (51).

Clinical Picture:

The clinical identification of a patient with SVCS is routinely simple because the symptoms and signs are typical and unmistakable. and their associates shows that the most common symptoms in descending order are dyspnea (54%), suffocation (54%), cough (29%), and arm or facial swelling (23%). Less common symptoms include chest pain, dysphagia, syncope, hemoptysis, and headache. Assuming a recumbent position, bending over or coughing exacerbate symptoms from a transient elevation in venous pressure (24), (25), (27).

Diagnosis:

There is many method of investigation but bilateral arm venography is the most useful diagnostic procedure. A variety of diagnostic tests are available for the assessment of SVCS and the actual workup has to be individualized to the particular clinical situation. An algorithm for

evaluation of SVCS, starting with a chest CT and working up toward more invasive procedure. Minimally invasive studies such as CT, magnetic resonance (MR) imaging, ultrasonography, radionuclide scintigraphy, and contrast venography are helpful in determining the location and extent of obstruction. Tests for establishing a histologic diagnosis include sputum cytology, bronchoscopy, thoracentesis, supraclavicular lymph node biopsy, and bone marrow biopsy. CT-guided needle biopsy and mediastinoscopy, a procedure that should be considered in many cases of SVCS, or a cervical substernal "extended" mediastinoscopy may be a definitive diagnostic procedure. Video assisted thoracoscopy surgery (VATS) or thoracotomy can be performed if all other procedures fail to establishing a histologic diagnosis (72), (73), (74), (75).

Treatment:

The treatment of superior vena cava syndrome is based on the underlying etiology of obstruction. Although malignancies are the main cause of superior vena cava syndrome, attempts to establish a histopathologic diagnosis are strongly recommended. This approach supports chemotherapy, radiation therapy or both. Because superior vena

cava obstruction often is rapidly progressive and lethal, it is considered an oncologic emergency. (100), (101), (102),(117)