# STAT

## SUPERIOR VENA CAVA SYNDROME

SUPERIOR VENA CAVA SYNDROME is the obstruction of blood flow through the superior vena cava.



- Intrathoracic malignancy, particularly lung (non-small cell lung cancer: 50% of cases; small cell lung cancer: 25%−35% of cases) and non-Hodgkin lymphoma (diffuse large B-cell lymphoma and lymphoblastic lymphoma: 10%−15% of cases)
- Thrombosis associated with catheters or pacemaker wires
- Rare causes: metastatic breast cancer,
  Hodgkin lymphoma, or other



#### CAUSES/ PATHOPHYSIOLOGY

- Solid tumor compression of the superior vena cava either by external compression from tumor or lymph nodes or direct invasion of the superior vena cava by thrombosis or tumor
- Causes venous congestion, leading to obstruction of blood return from the upper body
- Cardiac output potentially affected by poor blood return to the heart

## SIGNS & SYMPTOMS

- Facial swelling or head fullness (worse with bending down)
- Edema in the face, chest, neck, and upper extremities
- Dyspnea and cough
- ☑ Distended veins in the chest
- ☑ Ruddy complexion
- ☑ Tachypnea; plethora
- Severe or life-threatening: confusion, obtundation from cerebral edema, stridor from laryngeal edema or hemodynamic compromise



#### **BEST PRACTICE**

Prompt intervention can avoid life-threatening outcomes.



## **DIAGNOSTIC ASSESSMENT**

- Chest computed tomography with contrast
- Ultrasound followed by tissue diagnosis as indicated



- Assess for respiratory, cardiovascular, or neurologic compromise.
- Supportive care includes cardiovascular and respiratory support as needed.
- Symptom management addresses dyspnea with oxygen, elevation of head of bed, and anxiety management.
- Potentially treat underlying disease with radiation therapy, chemotherapy, or stenting.
- Thrombus is to be treated with anticoagulants or thrombolytics.
- Provide psychosocial support for symptoms and new or worsening cancer diagnosis.

#### **ADDITIONAL RESOURCES**

- Brant, J.M., & Walton, A. (2005). Superior vena cava syndrome: An education sheet for patients. Clinical Journal of Oncology Nursing, 9(4), 479–480. https://doi.org/ 10.1188/05.CJON 479-480
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