

CASE REPORT

A Rare Presentation of Mediastinal Lymphoma: Upper Airway Obstruction and Internal Jugular Vein Thrombosis

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Abstract

Internal jugular vein (IJV) thrombosis is a rare disease, and is usually encountered in intravenous drug users, prolonged central venous catheterization, deep seated head and neck infections or trauma. Associated malignancies are uncommon, and not well documented in the etiology of IJV thrombosis. A 39 year old woman presented to the Emergency Room with heavy vaginal bleeding secondary to uterine fibroids. She developed symptoms of upper airway obstruction while in the hospital. Ultrasound (U/S) and neck computerized tomography (CT) revealed a sizeable mass in the lower neck region and left internal jugular vein thrombosis (IJV). Management difficulties with neck mass and internal jugular vein (IJV) thrombosis is discussed along with review of literature.

Key Words: Thrombosis, Internal Jugular, Lymphoma, Mediastinal.

Introduction

Internal jugular vein (IJV) thrombosis is a rare disease, and is usually encountered in intravenous drug users, prolonged central venous catheterization, deep seated head and neck infections or trauma(1,2). Overt or occult malignancies are not a common cause of IJV thrombosis (3,4). IJV thrombosis itself can have potentially serious life-threatening complications that include pulmonary embolism, airway edema, chylothorax, papilledema as well as systemic sepsis if the thrombus were to become infected. We describe a case of left internal jugular vein thrombosis occurring as a complication of Non Hodgkin's Lymphoma (NHL).

Case report

A 39 year old woman presented to the ER with heavy vaginal bleeding for one day. She is known to have uterine fibroids with recurrent vaginal bleeding requiring multiple transfusions in the past. Past medical history includes

type 2 diabetes mellitus. On general examination, she was looking pale, with tachycardia of 134/minute, blood pressure of 134/82 mmHg, respiratory rate of 20/minute. Abdominal examination revealed a non tender pelvic mass extending up to umbilicus and per vaginal examination revealed fresh blood. Other significant findings included a large neck swelling which was presumed to be goiter for which she was undergoing investigations. Laboratory investigations revealed Hemoglobin 6.6g/dl, Haematocrit 0.22L/L, White Blood Cell count $9 \times 10^9/L$. Coagulation profile, TSH, Renal and Liver function tests were all within normal limits. She was admitted to the hospital and was transfused with packed red blood cells. While in the hospital, she developed sudden shortness of breath, the hospital critical care response team (CCRT) was called and emergency endotracheal intubation was done for upper air way obstruction. The patient was subsequently transferred to the intensive care unit (ICU). U/S and neck CT revealed a sizeable mass at the lower neck, thoracic inlet and at the anterior and superior mediastinum with significant mass effect on adjacent structures. Incidentally, IJV thrombosis was noted. There was no significant cervical lymphadenopathy (Figure 1). We encountered multiple clinical problems: profuse vaginal bleeding on one hand and the need for anticoagulation on the other. She underwent emergency thyroidectomy followed by debulking of the mass and a subtotal hysterectomy. Subsequently she was put on therapeutic anti coagulation. The mass was attached to the right lower lobe of the thyroid extending to the superior and anterior mediastinum and infiltrating the right recurrent laryngeal nerve. Histology of the mass revealed NHL, and Hashimoto's thyroiditis with no infiltration of the tumor within the thyroid. Subsequent management was uneventful, and was referred to the Oncology team for the management of NHL.

Discussion

IJV thrombosis refers to an intraluminal thrombus occurring anywhere from the intracranial IJV to the junction of the IJV and the subclavian vein where it forms the brachiocephalic vein (5). At the turn of the 20th century, thrombosis of the IJV was a feared complication of acute oropharyngeal infection. Currently, with widespread use of the IJV for venous access, central venous catheters are now the most common cause of IJV thrombosis. There is an increasing trend among intravenous drug abusers who use the internal jugular vein for vascular access which leads to increased incidence of IJV thrombosis which is of great concern (6).



Figure 1. Neck and chest CT with contrast (reconstructed image) showing a 8X7.5X4 cm sizeable mass at the lower neck, thoracic inlet and at anterior superior mediastinal (small arrows) with evidence of tracheal narrowing and with significant mass effect on adjacent structures. Left internal jugular main thrombosis is noted (big arrow)

Other causes include malignancy, head, neck and cardiac surgery. Rare causes include polycythemia, hyperhomocysteinemia, and neck massage. The incidence of Venous Thromboembolism (VTE) in patients with malignant lymphoma ranges from 5% to 13% (7, 8).

Local venous compression by a tumor mass and hypercoagulable state related to cancer are also well known risk factors for VTE (8). Lung, breast, ovarian cancers and mesothelioma are also associated with IJV thrombosis (4,9,10). We reported this case of left IJV thrombosis associated with mediastinal lymphoma with an initial presentation of upper airway obstruction which is a rare complication of a rare condition. Thrombosis of the superior mediastinal and neck veins can present in different ways, most commonly it presents as a painful neck mass, but patients can present also with stridor, dysphonia or dysphagia. CT, Doppler ultrasound and MRI have been well described for the diagnosis of the IJV thrombosis (11,12). CT scan with intravenous contrast is considered to be the investigation of choice (5). Low molecular weight heparin and long term anticoagulation is the treatment of choice for IJV thrombosis along with treating the underlying cause. In conclusion, IJV thrombosis although an uncommon complication of head and neck tumors, it must be considered in a patient with a large neck mass.

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