Superior vena cava syndrome as a clinical manifestation of recurrent cervical cancer

Sir,

Superior vena cava (SVC) syndrome occurs when the SVC is obstructed by either external compression or thrombosis.[1] Majority of the causes are secondary to malignancies such as non-small cell lung cancer (50%), small cell lung cancer (25%) and non-Hodgkin's lymphoma (10%).[2-4] Solid tumors with mediastinal lymph node metastasis, thymomas, mesothelioma and mediastinal germ cell tumors accounts for less than 10% of causes.[4-6] SVC thrombosis has been increasing in incidence due to the presence of more central venous instrumentation such as central lines, pacemakers. We, hereby, present a very unusual case of SVC syndrome as a manifestation of recurrent, metastatic cervical cancer.

A 50-year-old female with a past medical history of Human Immunodeficiency Virus infection (HIV) with an undetectable viral load, obstructive sleep apnea, early stage cervical cancer that was treated with concomitant chemotherapy and radiation presented to us with a 3-month history of a left supraclavicular mass. The patient complained of anorexia, 20 pounds weight loss, shortness of breath, facial puffiness and productive cough. She denied any headache, change in mental status, wheezing, stridor, fever, chills or night sweats. Her physical examination revealed a supraclavicular mass which was hard, painless, immobile and approximately 5 × 5 cm in size. She displayed mild facial puffiness and her chest exam showed visible veins in the left upper chest. The rest of the physical exam was unremarkable. Her lab work done including complete blood count, liver, kidney function test, thyroid stimulating hormone (TSH), urine analysis were within normal limits, except for a hemoglobin of 8 g/dl which was microcytic, hypochromic, leukocytosis (13.000) and low albumin. The admission chest X-ray revealed a right mediastinal opacity and left pleural effusion. A CT scan of the chest, abdomen and pelvis with intravenous and oral contrast was done which showed a large left supraclavicular lymph node [Figure 1a], a large right paratracheal lymph node compressing the SVC [Figure 1b], other para-aortic and mediastinal lymph nodes, left pleural effusion, bilateral hydronephrosis with numerous retroperitoneal lymph nodes. In light of her clinical presentation, a diagnosis of SVC syndrome was made. The patient did not have any cerebral edema or airway compromise and hence there was no role for any emergent or immediate intervention at the time of diagnosis. A fine needle aspiration biopsy of the left supraclavicular lymph node was done for definitive diagnosis. The histopathology was consistent with metastatic cervical cancer [Figure 2a and b] and palliative chemoradiation was initiated. The patient was unable to tolerate the therapy and her clinical condition continued to deteriorate. She was placed under hospice care and then died 3 weeks later.

The clinical presentation of SVC syndrome varies from mild symptoms to life-threatening conditions such as cerebral edema, laryngeal edema and airway compromise. Dyspnea is the most common clinical symptom, other symptoms including headache, facial puffiness and visible veins on the trunk.[4] Emergent radiotherapy was the first choice in the treatment of SVCs in the past but now it is changing. In life-threatening SVC syndrome, endovascular stenting followed by radiotherapy and corticosteroids (to reduce laryngeal edema) is indicated.[6] Steroids are not administered in the absence of laryngeal edema unless we have steroid sensitive tumors such as lymphomas, thymomas and germ cell tumors.[6-8] Chemotherapy is typically the first choice of therapy in cases related to chemosensitive tumors such as small cell lung cancer, non-Hodgkin's lymphomas and germ cell tumors.[8]

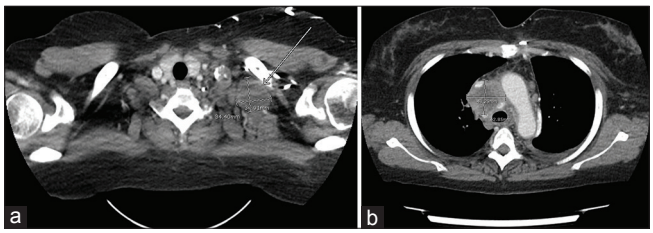

Figure 1: (a) CT neck with contrast showing left supraclavicular lymph node enlargement (b) CT chest with contrast showing a large right para-tracheal lymph node enlargement compressing the superior vena cava

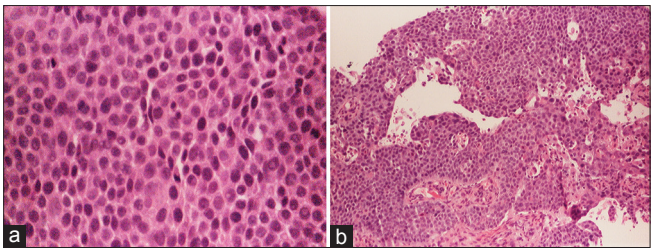

Figure 2: (a and b) Microphotography showing neoplastic cell proliferation organized in nests of tumor cells, within the supraclavicular lymph node tissue. Stain: Hematoxylin and eosin; magnification: ×100

Anticoagulation or thrombolytic therapy is only indicated in thrombosis-related SVC syndrome.[8,9]

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Conflicts of interest
There are no conflicts of interest.

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REFERENCES

1. García Mónaco R, Bertoni H, Pallota G, Lastiri R, Varela M, Beveraggi EM, *et al*. Use of self-expanding vascular endoprostheses in superior vena cava syndrome. Eur J Cardiothorac Surg 2003;24:208-11.
2. Yellin A, Rosen A, Reichert N, Lieberman Y. Superior vena cava syndrome. The myth–the facts. Am Rev Respir Dis 1990;141:1114-8.
3. Rice TW, Rodriguez RM, Light RW. The superior vena cava syndrome: Clinical characteristics and evolving etiology. Medicine (Baltimore) 2006;85:37-42.
4. Markman M. Diagnosis and management of superior vena cava syndrome. Cleve Clin J Med 1999;66:59-61.
5. Chen JC, Bongard F, Klein SR. A contemporary perspective on superior vena cava syndrome. Am J Surg 1990;160:207-11.
6. Rowell NP, Gleeson FV. Steroids, radiotherapy, chemotherapy and stents for superior vena caval obstruction in carcinoma of the bronchus: A systematic review. Clin Oncol (R Coll Radiol) 2002;14:338-51.
7. Kearon C, Akl EA, Comerota AJ, Prandoni P, Bounameaux H, Goldhaber SZ, *et al*. American College of Chest Physicians. Antithrombotic therapy for VTE disease: Antithrombotic Therapy and prevention of thrombosis, 9th ed. American College of Chest Physicians evidence-based clinical practice guidelines. Chest 2012;141(Suppl):e419S-94.
8. Kvale PA, Selecky PA, Prakash UB. American College of Chest Physicians. Palliative care in lung cancer: ACCP evidence-based clinical practice guidelines, (2nd edition). Chest 2007;132(Suppl):368S-403.
9. Wilson LD, Detterbeck FC, Yahalom J. Clinical practice. Superior vena cava syndrome with malignant causes. N Engl J Med 2007;356:1862-9.

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