

Scabbard Trachea: An Incidental Finding in the Orthopedic Clinic

Dear Editor,

Incidental radiological findings have been often noted in routine practice in all specialties. Many of them relate to specific specialty, but in rare instances, unusual radiological signs may also be seen in different specialty clinics which then follow appropriate referral of the case. It is not unlikely to witness incidental radiology findings in orthopedics, the discipline that heavily prescribes and depends on radiological investigations.

A 43-year-old male patient presented to us with left side shoulder region injury 3 weeks ago which was painful despite no appreciable functional limitation. There were history of dyspnea on exertion and history of old untreated goiter. The lower border of goiter was not palpable even on deglutition, thus suggesting retrosternal extension. The radiograph of the shoulder and chest region was done which revealed a uniting middle third clavicle fracture. There was a radiopaque mass lesion noted in the neck region which on careful observation was pushing the trachea to the right side [Figure 1a]. The tracheal narrowing was evident and the mass had intrathoracic extension [Figure 1b]. On a clinicoradiological basis, a provisional diagnosis of retrosternal goiter with scabbard trachea was made, and the case was referred to the respiratory medicine department for further evaluation.

Scabbard trachea (scabbard = sheath used to cover swords, knives or other blade weapons; with an illustrated depiction as in Figure 1c) is also referred to as saber-sheath trachea (saber = heavy sword with slightly curved blade with

one edge sharp and sheath = a case or covering for blade weapon) in medical literature.^[1] It is a radiological finding resulting from coronal tracheal narrowing as a result of some mass pressure effect. Usually, the compression occurs in the intrathoracic tracheal region and that resembles a tracheal outline resembling a scabbard.^[2] The shape of the trachea differs at multiple levels and most frequently is round or oval.^[3] Coronal narrowing and sagittal widening of the trachea necessitates careful observation of the tracheal outline in suspected cases. The scabbard trachea is a marker of severe airflow obstruction and may often result from chronic obstructive pulmonary diseases. Diseases of adjacent structures like goiter may at times be large enough to produce lateral compression, especially when more than half the volume of goiter mass extends beyond the thoracic inlet. These goiter types are termed retrosternal, substernal, intrathoracic, or mediastinal.^[4] History and palpation of a neck lump is critical to diagnosis. History of other pressure effects like those over neck pulsation and effect on the esophagus (deglutition) should be noted. In rare instances, the thyroid swelling may have a neoplastic etiology like thyroid carcinoma.^[5]

The knowledge of uncommon clinical or radiological signs of common and locally prevalent disorders should be known to the practitioner. The signs may or may not be of concerned discipline, but identification and prompt referral may at times be important for early diagnosis and avoidance of complications. This case snippet may also be of educational benefit for students and young practitioners alike.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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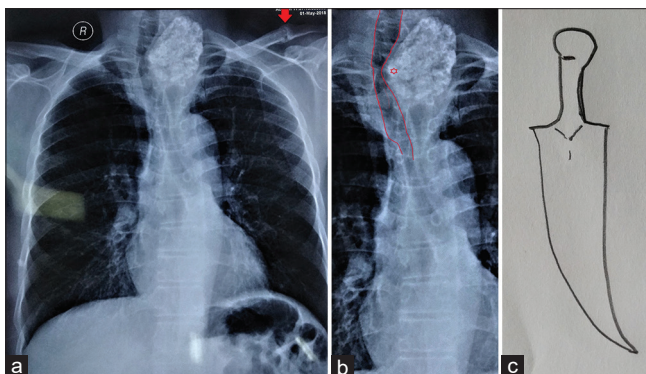


Figure 1: The radiograph showing left side clavicle fracture (arrow) and the tracheal narrowing and compressive shifting toward the right side by a retrosternal goiter (a). The magnified image section (b) showing the outline of the trachea (solid lines) with pressure effect from goiter (asterisk). The artistic diagram of a scabbard (c)

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