

Exophytic Chest Lesions: An Atypical Presentation of a Common Disease

Lucy Z. Shi, MD, Casey Luce, André M. Mansoor, MD
Oregon Health and Science University

Introduction:

Chest wall masses are uncommon and underlying causes are primarily neoplastic or infectious. The likelihood of infection is increased in patients with a history of intravenous (IV) drug abuse and immunocompromised state. The differential for this presentation is broad and includes neoplasms, granulomatous disease such as sarcoidosis, and infectious process such as TB or abscess. Of the chest wall masses that are neoplastic, the most common causes in adults include metastasis, local invasion of an underlying adjacent tumor, benign tumor, chondrosarcoma and lymphoma. Here, we describe chronic exophytic chest wall lesions presenting in the absence of systemic symptoms.

Case:

A 50-year-old homelessness man with active polysubstance use (IV heroin, IV methamphetamine, and tobacco), as well as current homelessness, was admitted for evaluation of enlarging and tender chest wall masses. He first noted two painful lumps on his sternum approximately three months prior to admission. After the masses persisted for several weeks he was evaluated in a mobile care clinic where he was diagnosed with rib fractures and possible rib dislocations. A chest x-ray was not obtained due to lack of access to a machine. The patient had progressive enlargement of the masses and worsening pain over the next several weeks, prompting presentation and admission to the hospital for further work up. He admitted to a history of abscesses and skin popping with heroin. He denied fevers or night sweats but did endorse an unintentional 5-10 pound weight loss. Physical exam was notable for two firm, raised, and tender masses over his right parasternal border, the largest was 4x4cm. No peripheral lymphadenopathy was found. Laboratory evaluation was notable for a white cell count of 12 K/cu mm with a normal differential and elevated sedimentation rate to 90. Non-contrast CT chest showed mediastinal and internal mammary chain masses suggestive of metastatic disease. A right internal mammary mass was associated with lytic cortical destruction of the adjacent sternum. Our primary concern was a hematologic malignancy or solid tumor of unknown primary. Atypical fungal infection, tuberculosis, and granulomatous disease were considered, but felt to be less likely. An excisional biopsy of the chest wall mass was performed. Final pathology showed poorly differentiated, non-keratinizing squamous cell carcinoma. PET showed an area of increased activity from the right hilum and superiorly involving the lung apex. Collectively, his presentation was felt consistent with a lung primary. He underwent palliative chest wall radiation and subsequently moved to Michigan to be closer to family.

Discussion

Squamous cell lung cancer comprises around a third of lung cancers. Presenting symptoms most commonly include cough, dyspnea, and weight loss. This cancer is known to invade surrounding soft tissues which can cause localized symptoms, as with a Pancoast tumor. However, only 5% of lung cancers have direct bony invasion and of these, most are limited to the parietal pleura. This patient presented with bony invasion from nodal metastases, which is unusual, and the lack of other localizing symptoms made the primary tumor more challenging to identify.

