"Why Am I Spitting Up Blood?"

By Jerzy K. Pawlak, MD, MSc, PhD; and Wanda Dabrowska, MD

A 78-year-old male has a long history of diabetes, hypertension, and hypercholesterolemia. He had a history of smoking at least 50 packs of cigarettes per year, but stopped smoking 18 years ago. However, he is still exposed to second-hand smoke, as his wife is a heavy smoker

In 1995, he had a lesion on his left helical rim for several months (Figure 1). He underwent a wedge excision of the ear and repair by advancement helical flap.

In 1997, a lymph node was found in the post-auricular area (Figure 2). This node was excised and radiation was given to the entire left neck so as to include the entire lymph node chain. He has been followed for nearly three years since the radiation with no evidence of local failure.

In November 2001, he had one episode of minor hemoptysis.

A computed tomography scan of the thorax with liver and adrenal cuts was done (Table 1). Lobulation in the left upper lobe is shown in Figure 3.

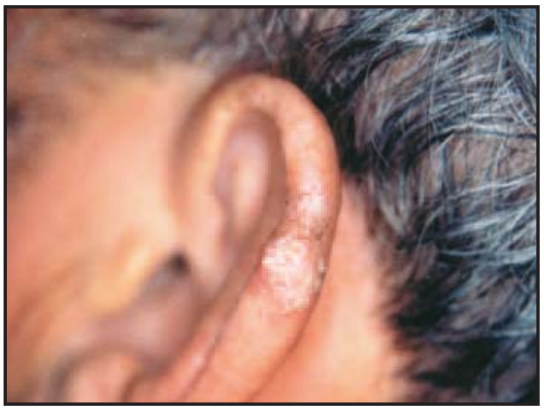

Figure 1. Lesion of the left helical rim.

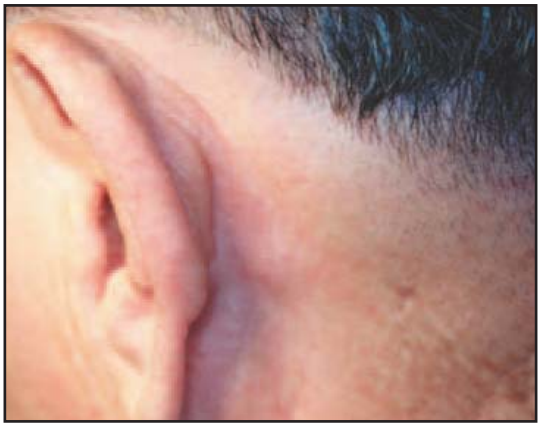

Figure 2. Lymph node in the post-auricular area.

What's the diagnosis?

A. Tuberculosis
B. Mitral stenosis
C. Squamous cell carcinoma
D. Pulmonary embolism — *for the answer, see the next page*

Table 1
Results of computed tomography scan

Presentation	Size	Location
Lobulation	4.5 cm in mass	Left upper lobe
Small nodes	1 cm in diameter	In the mediastinum, lateral to the pulmonary artery

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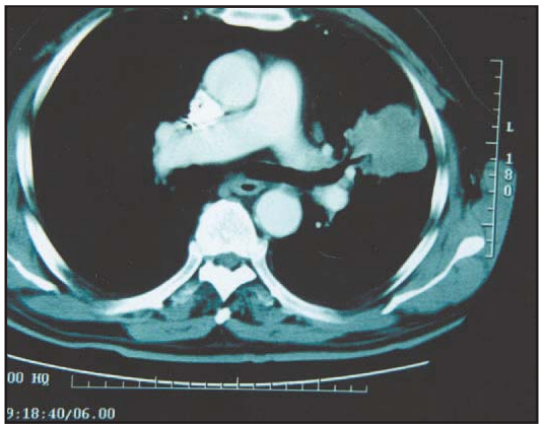

Figure 3. Lobulation in the left upper lobe.

Answer:
Squamous cell carcinoma

A biopsy of the lesion on his left ear in 1995 showed squamous cell carcinoma and the excised lymph node in 1997 showed well-differentiated squamous cell carcinoma.

How can the patient be treated?

The patient underwent surgery. A large left upper lobe tumour was found invading the hilum. The pumonary artery appeared to be infiltrated by the tumour at the level of the hilum.

A left pneumonectomy was performed. The final pathology showed moderately differentiated, infiltrating squamous cell carcinoma with extensive inflammation and necrosis. It was surrounding, but not involving, the arteries at the resection margin. Similarly, it was surrounding, but not involving, the vein in the resection margin. All the resection margins were clear of the tumour, as were all the lymph nodes. Therefore, the patient was diagnosed as having aggressive stage IB, T2NO MO squamous cell carcinoma.

It is also possible that he has metastatic disease from his previously diagnosed squamous cell carcinoma of the left ear.

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More on sqamous cell carcinoma

The distribution of squamous cell carcinoma is similar to basal cell carcinoma in that the vast majority occurs in the head and neck. Incidence of regional node metastases from squamous cell carcinoma depends largely on the type and location of the lesion. Squamous cell carcinoma of the scalp, ear, and extremities exhibits a high propensity for metastases. A subgroup of squamous cell carcinoma patients have Marjolin's ulcer, which represents a malignant degeneration in chronic ulcers of the skin, particularly those occurring in burn scars. If the size of the ulcer is > 5 cm, the metastases rate to regional lymph nodes is 44%.

Generally, squamous cell carcinoma metastasizes to the regional lymph nodes in 10% of cases. Blood spread occurs rarely and late, and is responsible for the distant metastases to the lungs and bones. This scenario is possible in this patient's case, but because of a very strong previous history of smoking and recent exposure to second-hand smoke, the possibility of secondary primary lung cancer is more likely. Dx

References available upon request—contact *The Canadian Journal of Diagnosis* at **diagnosis@sta.ca**.