of pleural effusions from 200 patients. Four of the 25 patients had evidence of pancreatitis. Of the 21 patients with nonpancreatic amylase-rich effusions, metastatic malignancy was the most commonly associated condition (13 patients). In 14 of the 21 patients in whom an amylase isoenzyme determination was performed, salivary-type amylase was predominant. The authors conclude that the finding of a pleural effusion rich in salivary isoamylase should prompt an evaluation for underlying neoplasm.

We also performed a prospective study that was presented at the 58th Annual Scientific Assembly, Chicago, October 1992. We measured pleural fluid and serum amylase concentrations in 163 patients, 77 with malignant pleural effusions (MPE), 52 with exudative benign pleural effusions (BPE), and 37 with transudative pleural effusions (TPE). In none of the patients, pleural effusion was a result of pancreatitis or rupture of the esophagus. Pleural fluid amylase concentrations were significantly higher in malignant pleural effusions than in transudative pleural effusions (106.3 ± 101 IU/L, ranging from 4 to 485, vs 62 ± 45.8, ranging from 14 to 195, p < 0.02). Also the pleural fluid/serum ratios were higher in malignant pleural effusions than in transudative pleural effusions (1.02 ± 0.9, ranging from 0.1 to 4.9, vs 0.55 ± 0.3, ranging from 0.1 to 1.1, p < 0.003). Pleural fluid amylase concentrations and the pleural fluid/serum ratios were higher in malignant pleural effusions than in benign pleural effusions (including exudates and transudates). Serum amylase concentrations did not show statistically significant differences among the groups (MPE 122.7 ± 74.8 IU/L, BPE 122.2 ± 57.6 IU/L, TPE 125 ± 75.1 IU/L). Pleural fluid amylase concentrations of more 220 IU/L (upper limit of normal for serum) were observed in 9 of 77 (11 percent) patients with malignant pleural effusions, but in none of the patients with benign pleural effusions (p < 0.004), including 25 patients with parapneumonic effusions. The pleural fluid amylase concentrations ranged from 226 to 485 IU/L, and the pleural fluid/serum ratios were higher than one in all patients except one (ranging from 0.8 to 4.2). Lung cancer was the most common cause for amylase-rich effusions (6 of 9 cases: five adenocarcinomas, one histologically undetermined carcinoma). One patient was affected by pleural mesothelioma of epithelioid papillary variety (pleural effusion amylase 310 IU/L, pleura fluid/serum ratio 2.4), one patient by adenocarcinoma of the breast, and one patient by metastatic carcinoma of unknown primary.

The serum amylase concentrations were increased above the normal range in 5 of 31 (9.7 percent) patients with transudative pleural effusions, 6 of 50 (12 percent) patients with benign pleural effusions, and in 11 of 72 (15.3 percent) patients with malignant pleural effusions (no significant differences). The serum amylase concentrations were normal in eight of nine patients with amylase-rich effusions. The amylase concentrations in pleural fluid were higher than those in serum in eight of the nine amylase-rich pleural effusions.

Our results agree with those reported by Joseph et al11 for the incidence of amylase-rich effusions. However, we observed some differences. First, in our series, malignancy was the only cause for an amylase-rich effusion. Second, adenocarcinoma of the lung was the more frequent histologic type. Third, one case of amylase-rich effusion due to pleural mesothelioma was present; this has not been reported in the past.5–6 We could not determine amylase isoenzyme analysis. Nonetheless, we agree with Joseph et al11 that pleural effusions amylase concentrations increased above the normal range for serum, especially salivary-type amylase, should raise the suspicion of malignancy, mainly carcinoma of the lung.

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REFERENCES

Relationship of Clinical Findings to CT Scan Evidence of Adrenal Gland Metastases in the Staging of Bronchogenic Carcinoma

To the Editor:

In an article that appeared in the December 1992 issue of Chest, Silvestri et al1 conclude that computed tomographic (CT) scans through the adrenal glands “are unnecessary when staging newly diagnosed bronchogenic carcinoma if the findings from the initial clinical evaluation are normal.” The implication is that under these circumstances “CT scans of the adrenal glands need not be a routine part of the evaluation of bronchogenic carcinoma.”

Imaging the upper abdomen during chest CT examination is performed routinely in virtually all radiology departments, regardless of the reasons for the examination. On modern scanners it requires approximately one extra minute of time, and there is no additional charge. It is a “freebie,” like observing the trachea during bronchoscopy for a lung lesion.

In my experience as a radiologist, the normal clinical evaluation (history, physical examination, and laboratory studies), which in the study by Silvestri et al rendered adrenal imaging unnecessary, has usually not been completed on patients referred for CT examination of suspected bronchogenic carcinoma. Many of these individuals are outpatients or are having their CT examination concomitant with their laboratory workup. I accept the authors’ conclusions that normal clinical findings make an adrenal or liver lesion unlikely to represent a metastasis. However, assuming good clinical judgment, the information that these organs are normal or abnormal will certainly not hurt the patient. The CT appearances of the liver and adrenals may serve as a baseline if metastases are later suspected, as is all too often the case.

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REFERENCE

To the Editor:

We are seriously concerned by the obvious contradiction in Dr. Hall’s rationale for routinely performing CT scans through the