controlled prospective study is done with close follow-up and standardized therapy with steroids, the relative therapeutic benefit in each group is not certain. What cannot be ignored is the relative duration of symptoms prior to biopsy, the progression of very typical cellular desquamative interstitial pneumonia to cicatrized desquamative interstitial pneumonia, and the strikingly similar morphologic appearance, excluding fibrosis, in the two phases (Fig 1 and 2).

In Rosan’s epigrammatic comments as umpire in the eternal contest between “lumpers” and “splitters,” he appears to have also overlooked the importance of multifocal exfoliation in the original material of Liebow et al. We are in agreement that one must see beyond the morphologic appearance to a disease process which provides us with a superb model for the study of cell-mediated immune mechanisms. The migrating macrophage, modified by poorly characterized inhibiting and stimulating agents (such as migration-inhibiting factor, chemotactic factor, or other lymphokines), should be the focus of these future investigations.

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REFERENCES

To the Editor:

DeRemee’s comments pose a very interesting question. What is a new disease? Is it one with a consistent clinical and laboratory setting? Is it one with a distinctive morphologic pattern detectable by histopathologic studies? Or is it a combination of the two?

Desquamative interstitial pneumonia illustrates very vividly the difficulties in answering these questions. The original description relied heavily on the clinical response to therapy with steroids and the characteristic histopathologic pattern. Under ancillary and laboratory findings the radiographic picture of bilaterality was emphasized.

Of these three criteria the histologic pattern remains as the only distinctive feature of desquamative interstitial pneumonia because of the innumerable conditions that respond to therapy with steroids and are present as bilateral pulmonary infiltrates on the chest x-ray film. The problems soon started when “biopsy-proven,” histopathologically classic cases of desquamative interstitial pneumonia deviated from the other two criteria, either by not responding to therapy with steroids or by occurring in a localized fashion. Subsequently, numerous conditions associated with the histopathologic pattern of desquamative interstitial pneumonia appeared in the literature, as cited in our report.

As a result, the acceptance of desquamative interstitial pneumonia as a separate new disease became controversial. It seems advisable, therefore, that until the etiology of “classic” desquamative interstitial pneumonia is elucidated, the diagnosis of desquamative interstitial pneumonia as a clinicopathologic entity should be approached with caution after ruling out other underlying conditions. As a pattern of reaction, the description by Liebow et al of desquamative interstitial pneumonia should be overlooked.

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Serial Flow-Volume Loops as an Aid to Management of Primary Oat Cell Carcinoma of the Trachea

To the Editor:

The diagnosis of tracheal tumors with the maximum flow-volume curve has been described, and the advantage of following the course of such lesions with it has been alluded to. A case report of ours confirms this advantage.

**Case Report**

A 47-year-old woman was referred to the Bishop Clarkson Memorial Hospital, Omaha, in January 1975 with complaints of cough, hemoptysis, and dyspnea for two months, and a heavy smoking history. Stertorous breathing with inspiratory stridor was localized to the neck, and no other abnormalities were noted on physical examination.

A maximum flow-volume curve demonstrated reduced peak inspiratory and expiratory flow (Fig 1A), and bronchoscopic examination revealed a hemorrhagic lesion 5 cm below the cords. It was horseshoe-shaped, narrowing the tracheal lumen to 6 mm; and pathologic sections revealed anaplastic oat cell carcinoma. No evidence for metastases could be found. Therapy with radiation (4,900 rads in 5 weeks) and combined chemotherapy with cyclophosphamide, vincristine, and methotrexate produced clinical improvement, confirmed by a repeat maximum flow-volume curve (Fig 1B).

In June 1975, the patient was dyspneic, the maximum flow-volume curve (Fig 1C) showed a marked decrease in both inspiratory and expiratory flows, and the chest x-ray film was consistent with lymphangitic metastases. Bronchoscopic examination revealed a necrotic mass causing 80 percent obstruction of the trachea. The patient improved (Fig 1D) after therapy with an additional 1,000 rads and an intermittent three-week schedule of dosage with cyclophosphamide, doxorubicin (adriamycin), and methotrexate, but she died from an overwhelming infection 26 months after diagnosis.

**Discussion**

Miller and Hyatt noted the tendency to overlook obstructing lesions of the major airway in favor of chronic obstructive pulmonary disease in patients with dyspnea and noisy breathing. Hemoptysis was a clue in this particular case.

This patient's initial maximum flow-volume curve is consistent with a fixed lesion similar to the artificial orifices utilized by Miller and Hyatt. After treatment the inspiratory slowing persisted, but the rate of expiratory flow improved, changing the pattern to a variable extrathoracic intratracheal obstruction. With recurrence the pattern reverted to fixed and then returned to variable with retreatment. The variable pattern suggested residual tumor or scarring of the trachea secondary to therapy with radiation.

Our patient appears to represent the eighth reported case of primary oat cell carcinoma of the trachea. Previously, the longest reported period of survival for a patient with this tumor in this unique location was nine months.

**References**


**Figure 1.** Maximum flow-volume curves. A, Initial curve (January 1975), showing reduced peak expiratory and inspiratory flow. B, Curve after therapy with radiation and chemotherapy, showing improvement. C, Curve in June 1975, showing marked decrease in both inspiratory and expiratory flows. D, Curve after additional therapy with radiation and chemotherapy, showing improvement.