Well-differentiated Neuroendocrine Carcinoma
A Designation Comes of Age

In this issue (see page 1053), Lequaglie and co-workers describe a retrospective analysis of their ten-year experience with resected, well-differentiated neuroendocrine carcinoma (WDNC). Their work confirms and extends the observations of others that WDNC is a clinicopathologic entity distinct from other neuroendocrine tumors of the lung, including carcinoid tumor and small cell lung carcinoma (SCLC). Utilizing morphologic criteria defined by Gould et al., the authors identify 19 cases of resected WDNC. Significantly, while six of the first 12 cases were diagnosed as atypical carcinoids, the remaining six cases had originally been diagnosed as SCLC, thereby reinforcing the observation that some WDNCs are mistaken for SCLC. Refinements in the morphologic diagnosis of WDNC by Warren and co-workers clearly demonstrate that, while the WDNC category encompasses tumors originally diagnosed as atypical carcinoids, it also includes tumors that may be incorrectly diagnosed as SCLC, particularly when diagnostic material is limited to small bronchoscopic biopsy specimens or cytologic preparations. In our experience, these cases represent a large majority of long-term survivors with a diagnosis of SCLC. Similar morphologic observations have been made in cytologic studies of bronchial specimens, and criteria have been established for the cytodagnosis of WDNC.

In their analysis of the clinical data, Lequaglie and co-workers suggest that surgery may be the treatment of choice for patients with localized WDNC. Prospective studies based on careful histologic subtyping and clinical staging should define the role of primary surgical therapy and adjuvant therapies in the treatment of patients with WDNC. Additionally, immunohistochemical and flow cytometric analyses of these tumors may provide adjunctive prognostic data useful in the management of WDNC. Immunohistochemical studies of SCLC with monoclonal antibody SCCL 175, an antibody directed against SCLC, have shown that the expression of the antigen defined by this antibody can distinguish WDNC and SCLC and that its expression is associated with shorter patient survival times. The use of flow cytometric DNA analysis is still unclear, although it also may provide supportive prognostic information in classifying neuroendocrine carcinomas of the lung.

The strength of any tumor classification system depends on its ability to be reproducibly applied by pathologists and its utility to clinicians for the treatment of patients. Mounting evidence indicates that recognition of WDNC as a distinct type of pulmonary neuroendocrine neoplasm fulfills these criteria. The prospective recognition of WDNC will allow the development of new therapeutic modalities. Meanwhile, it is also clear that new tests must be found to objectively define the different neuroendocrine carcinomas of lung.

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References
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Management of Parapneumonic Effusions

Approximately 40 percent of patients with acute bacterial pneumonia will have an associated pleural effusion. Most of these parapneumonic effusions will resolve with only the administration of antibiotics. I have used the term complicated parapneumonic effusion for a parapneumonic effusion that requires tube thoracostomy for resolution or which has a culture positive for bacteria. In the clinical situation, one would like to identify as early as possible those individuals who will need chest tubes, since a freeflowing complicated parapneumonic effusion can progress to a multiloculated effusion in a matter of hours. Once the complicated parapneumonic effusion becomes loculated, its management is much more difficult. Whether or not an individual with a parapneumonic effusion requires tube thoracostomy depends on several different factors. The bacteria responsible for the underlying pneumonia are important; parapneumonic effusions due to Staph aureus or anaerobic bacteria.