The solitary pulmonary nodule: Can we afford to watch and wait?

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In this issue Quarterman and associates¹ address an issue that continues to plague thoracic surgeons. In patients with solitary pulmonary nodules, is it best, as some authors advocate, to excise each and every one of them for diagnosis or can one be selective in proposing excisional therapy to provide a diagnosis? There are many diagnostic options when one encounters such a patient. Imaging techniques, including review of previous radiographs, might allow one to determine conclusively that the lesion in question is benign. For those lesions larger than 1 cm, the use of positron emission tomographic scanning or less invasive transthoracic or transbronchial biopsy techniques can be accurate in up to 90% of cases so investigated.² The question addressed by these authors is whether watchful observation for a short time is a reasonable alternative, only intervening if this observational period suggests that malignancy is still a possibility.

When one encounters a solitary pulmonary nodule in which previous imaging is not available for comparison, it certainly is reasonable to repeat the imaging procedure in 2 to 3 weeks to ensure that the lesion has not disappeared. Some practitioners advocate a course of antibiotic therapy in conjunction with this.

With the increased use of screening spiral computed tomographic scans and the availability of 3-dimensional (3-D) reconstruction, it is now possible to assess the growth of a lesion within 1 month of identification. Although the size might not increase significantly, the shape of the lesion might alter such that growth can be implied.³ This is especially valuable in subcentimeter lesions in which minimally invasive approaches to diagnosis might not be available. It is highly likely, considering tumor doubling time, that most lesions can be identified as potentially malignant with as short a period of observation as 1 to 2 months.

What the authors try to address is, is it harmful to observe lesions for a more extended period of time? Although they do recognize the limitations of their study, their conclusions do suggest that observation for greater than 3 months might not adversely affect cancer survival. Unfortunately, because of the limitations of this study, I do not believe that their conclusions are necessarily valid. As a sideline, it is interesting to note that of the delays greater than 6 months, only one could be attributed to planned observation. However, this article does challenge us to study this question in a more controlled prospective way.

The early reported results of spiral computed tomographic screening studies suggest that in the very tiny (≤ 5 mm) lesions, for which many of the protocols allowed 3-month observation, those patients ultimately given a diagnosis of lung cancer fell mainly into the very early (T1 N0) stage and, at last report, have survived their treatment without tumor recurrence. Too early intervention can be harmful by increasing invasive diagnostic approaches.⁴

What can we conclude from the work of Quarterman and associates? When presented with a patient with a pulmonary abnormality, attempts at early diagnosis should be made whenever possible. However, when watchful observation appears to be the diagnostic approach of choice, the clinician does have the option of a short-term watchful waiting period (ie, the shorter, the better), despite no evidence at the present that a longer waiting time has an adverse outcome effect.

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