Natural Decrease of Benign Metastasizing Leiomyoma

To the Editor:

We read with interest the report by Abramson and Gilkeson (July 1999) regarding the benign metastasizing leiomyoma (BML). We report herein our experience of natural decrease of BML in size.

A 52-year-old woman was admitted to our hospital due to abnormal shadows found on chest roentgenograms (Fig. 1, top left), and CT (Fig. 1, bottom left) detected a number of pulmonary nodules in whole lung fields. Her medical history included uterine myomectomy at the age of 43 years. A thoracoscopic lung biopsy revealed leiomyomatous tumors that were histologically similar to the uterine myoma removed 9 years previously. The final diagnosis was BML. The values of estrogen and progesterone receptors in the resected specimen were 136.9 fmol/mg and 5.6 fmol/mg, respectively.

Although we recommended treatments such as hormone therapy, she strongly refused them. Therefore, she was discharged from hospital on the condition that she would be followed up on an outpatient basis.

After that, she was not seen for about 1 year, and she visited the outpatient department on July 13, 1999. Chest roentgenogram (Fig. 1, top right) and CT (Fig. 1, bottom right) showed significantly reduced tumors in size. When asked if she had noted any prominent changes since leaving the hospital, she informed us that she had undergone menopause. The serum estrogen and serum progesterone levels before menopause were 20.4 μg/dL and 1.5 ng/mL, which decreased to 4.3 μg/dL and 0.3 ng/mL after menopause, respectively. BML is said to be hormone dependent; therefore, the present case suggests that menopause may play a role in the natural decrease of its size.

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To the Editor:

The authors present a very interesting case of spontaneous regression of benign metastasizing leiomyoma (BML). BML may contain estrogen and progesterone receptors and is thought to be hormone responsive. The literature includes instances in which pulmonary lesions may regress spontaneously or after hormonal manipulation (surgical oophorectomy and medical treatment such as progesterone or anti-estrogen therapy). In addition, the effects of natural hormonal changes in women (pregnancy, menopause) on tumor growth have been described. For example, a case of a 30-year-old pregnant woman with presumed BML demonstrated spontaneous regression of pulmonary nodules during pregnancy and into the postpartum period. On the other hand, the lesions in our patient showed no significant change in size despite separate 6- to 12-month trials of tamoxifen, progesterone, and an aromatase inhibitor (anastrozole). This occurred in spite of the presence of positive estrogen and progesterone receptors on smooth muscle cells. Although there are cases that...
suggest that menopause may play a role in the decrease of tumor size, other growth factors may contribute.

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Spirometry in the Diagnosis of Small Airways Obstruction

To the Editor:

In the article titled “Small Airways Obstruction Syndrome” (July 1999), Dr. Stanescu reported on four patients with the functional pattern of decreased vital capacity (VC) and FEV1, normal FEV1/VC ratio and total lung capacity, and increased residual volume (RV). In these patients, Dr. Stanescu alleges, the obstructive pattern would be overlooked on routine spirometry unless RV also was measured.

While a low VC or a low FEV1 may result from either a restrictive or an obstructive defect, the FEV1/VC ratio should be the primary guide to distinguish between the two patterns. Three of the four subjects in Dr. Stănescu’s study have FEV1/VC ratios <70%, which would, therefore, place them in the appropriate category of obstructive defect! The ATS guidelines suggest that, indeed, in the presence of a borderline FEV1/VC ratio, maximal expiratory flow rates may help confirm the presence of airway obstruction. But FEV1/VC ratios in our subjects were not borderline. They were within normal limits. Furthermore, the guidelines emphasize that “when FEV1/VC ratio is within the expected range, abnormalities in flow occurring late in the maximal expiratory flow-volume curve, should not be graded as to severity, and, if mentioned, interpretations of their clinical significance should be guarded.”

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To the Editor:

I thank Drs. Theerthakarai and Khan for their interest in my article (July 1999). Alluding to the American Thoracic Society (ATS) statement, the authors write that the FEV1/vital capacity (VC) ratio should be the primary guide to distinguish between a restrictive and an obstructive defect. Of course, the authors are correct. But the problem is how to define the defect, when FEV1/VC ratio is within normal limits, and both FEV1 and VC are decreased, ie, the syndrome we have described. The authors write that the FEV1/VC ratios of the patients we presented did not place them in the category of obstructive defect!

The authors also write that they have “discovered this pattern in several subjects who were correctly diagnosed as obstructive, based on the spirometric assessment alone, showing a disproportionate decrease in FEF25–75% [forced expiratory flow after 25 to 75% of VC has been expelled] and normal FEV1/VC ratio (confirmed, of course, by a high RV and RV/TLC [total lung capacity] ratio).” One might ask why the authors needed another measurement (FEF25–75%) when the defect was correctly diagnosed by the ATS statement? They quote, “defining a fixed FEV1/VC [vital capacity] ratio as a lower limit of normal [my emphasis] is not recommended in adults because FEV1/VC is indirectly related to age and height.” All our four subjects had percentage of predicted FEV1/VC ratios within normal limits, as shown in Table 1. We also computed in our subjects expected values for the FEV1/VC ratio using two well-known American formulas. According to subjects’ ages and heights, the FEV1/VC ratios of our subjects were also within expected limits. Therefore, the FEV1/VC ratio of the patients we presented did not place them in the category of obstructive defect!

The ATS guidelines suggest that, indeed, in the presence of a borderline FEV1/VC, maximal expiratory flow rates may help confirm the presence of airway obstruction. But FEV1/VC ratios in our subjects were not borderline. They were within normal limits. Furthermore, the guidelines emphasize that “when FEV1/VC ratio is within the expected range, abnormalities in flow occurring late in the maximal expiratory flow-volume curve, should not be graded as to severity, and, if mentioned, interpretations of their clinical significance should be guarded.”

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