noted the return of the pruritic, erythematous rash approximately 1 h after his dose of PZA. The rash was now confined to the patient's buttocks and thighs. PZA was discontinued. Biopsy of the rash revealed a spongiform dermatitis. The presence of eosinophils and necrotic keratinocytes in the specimen confirmed the presence of a drug reaction. The rash was never photosensitive and at no point did the patient develop stridor, angioedema, or a peripheral eosinophilia. Laboratory studies of liver function remained normal throughout his course.

Cutaneous hypersensitivity to INH and rifampin have been well described and may occur in up to 5% of patients taking those medications. The incidence of cutaneous hypersensitivity related to PZA use is unknown but is reported to be rare. The temporal relationship between this individual's PZA dosing and the development of his rash implies a causal relationship as do the findings on skin biopsy. As the incidence of multibug resistant tuberculosis continues to rise, reliance on PZA will increase. Clinicians must therefore be aware of the toxicities associated with this medication. This case demonstrates that cutaneous hypersensitivity reactions may occur with PZA use and that such reactions may be well tolerated.

Capt Andrew F. Shorr, MC, USA, and Maj Richard F. Troutta, MC, USA, Walter Reed Army Medical Center, Washington, DC

REFERENCES

Cyfra 21-1 in Cavitary Lung Lesions

To the Editor:

We read the article by Dr. Wieskopf and colleagues on "Cyfra 21-1 as a Biologic Marker of Non-small Cell Lung Cancer" (CHEST 1995; 108:163-69). We agree with their results that Cyfra 21-1 is a sensitive and specific tumor marker of squamous cell lung carcinoma. However, considering the cell lysis or tumor necrosis as a mechanism for elevated serum cytokeratin, a further analysis should be needed in view of cavitary or necrotic lung lesions.

We have reviewed our data on Cyfra 21-1 in 201 patients with non-small cell lung cancer (NSCLC) and benign lung diseases (tuberculosis, lung abscess, pneumonia) according to the radiologic evidence of cavitary or necrotic lung lesions (by plain films or CT). Our preliminary data (Table 1) shows that Cyfra 21-1 cannot differentiate noncavitary or nonnecrotic non-small cell lung cancer (A) from cavitary or necrotic benign lesions (D). With the aid of radiologic findings of cavitary or necrotic lesions, however, separation of malignancy and benignity was possible with quite high sensitivity and specificity. Therefore, we concluded that the diagnostic criteria of Cyfra 21-1 should be different according to the presence of cavitary or necrotic lesions.

Young-Chul Kim, MD, Kyoong-Ok Park, MD, In-Seon Choi, MD, and Sung-Chul Lim, MD, Department of Internal Medicine; and Hee-Seung Bom, MD, Department of Nuclear Medicine, Chonnam University Hospital, Kwangju, Republic of Korea

Reprint requests: Dr. Kim, Dept of Internal Medicine, Chonnam University Medical School, 8, Hukdong, Dongku, Kwangju, 501-757, Republic of Korea

To the Editor:

Dr. Young-Chul Kim and colleagues raise the question of the value of Cyfra 21-1 in discriminating cavitary benign lung lesions from lung cancer without necrotic cavity. The authors do not indicate the p value obtained with the comparison between A and D, but apparently it is >0.05.

It is quite possible that there might be some more important increases in Cyfra 21-1 levels in cavitary benign lesions of the lung as elevation of Cyfra 21-1 is related to cell death.

We did not specifically study cavitary benign lesions in our series of benign pulmonary diseases in which most of the patients had COPD, asthma, or sarcoidosis, and the median value we observed was 1.0 ng/mL with interquartile range 0.57 to 1.4. In a study including many more patients with benign lung diseases; COPD (n=112), acute infectious diseases (n=94), tuberculosis (n=96), asthma (n=74), diffuse noninfectious interstitial diseases (n=130), and others (n=40), the Cyfra 21-1 serum assay values ranged from 0.01 to 18.00 ng/mL with a median value of 0.5 ng/mL which is quite lower than the 1.7 ng/mL found in the noncavitary benign lesions by Kim et al. According to the diseases mentioned above, there were certainly in this series of 546 patients some cavitary lung lesions but they were not specifically studied.

Renal failure and liver cirrhosis are known factors of elevation of Cyfra 21-1. So, apart from the problem of cavitary lesions, there is a known heterogeneity of the values of Cyfra 21-1 in benign diseases explaining the somewhat consensual 95% specificity calculated in the benign diseases. This specificity is obtained with a cut-off level of Cyfra 21-1 of 3.3. ng/mL.

Elisabeth Quoix, MD, Hopitaux Universitaires de Strasbourg, Strasbourg, France

REFERENCES

Table 1—Serum Levels of Cyfra 21-1 According to Histologic Diagnosis and Presence of Cavitary or Necrotic Lesions*

<table>
<thead>
<tr>
<th>Serum Cyfra</th>
<th>Cases Without</th>
<th>Cases With</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyfra 21-1 (ng/mL)</td>
<td>Cavity</td>
<td>Cavity</td>
</tr>
<tr>
<td>(n=201)</td>
<td>(n=145)</td>
<td>(n=56)</td>
</tr>
<tr>
<td>Lung cancer (n=91)</td>
<td>4.1 (2-8.8)</td>
<td>13.1 (7.1-17.5)</td>
</tr>
<tr>
<td>Benign lesions (n=110)</td>
<td>1.7 (0-2.8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(A=70)</td>
<td>(B=21)</td>
</tr>
<tr>
<td></td>
<td>(C=75)</td>
<td>(D=35)</td>
</tr>
</tbody>
</table>

*Values represent median and interquartile range in parenthesis.

p<0.05 (between A & B, C & D).