were homeless, a recognized epidemiologic factor in resistance). One half of the patients in our series were Hispanic, but race did not bear relation to resistance in this small group.

Thus, atypical manifestations of tuberculosis are common in patients with AIDS and related complex, as previously described, but the circumstance is not per se associated to increased drug resistance, and an initial two-drug regimen is probably sufficient when the clinical condition of the patient does not call for aggressive treatment and the risk for drug resistance is otherwise low or absent.

Ariel Pablós-Mendez, M.D.; Mario C. Raviglione, M.D., and Ruggero Battan, M.D.
Cabrini Medical Center, New York

REFERENCES
3 Centers for Disease Control. Diagnosis and management of mycobacterial infection and disease in persons with human immunodeficiency virus infection. Ann Intern Med 1987; 106: 254-56
4 Chaisson RE, Slutkin G. Tuberculosis and human immunodeficiency virus infection. J Infect Dis 1989; 159:96-100

Pulmonary Function in Long-Term Survivors of Thoracoplasty

To the Editor:

We found the article by Bredin very interesting. Thoracoplasty patients belong to the high risk group to the preantibiotic era in tuberculosis treatment. Early post-operative mortality was high in this group, but those who survived had a relatively good life expectancy. The effect of extensive thoracoplasty (TPL) on the VC, 30 years after surgery, is comparable with that of pneumonectomy: 49 percent of predicted vital capacity (VCp).

We recently presented data on a 30 year follow-up of a group of 56 patients who had thoracoplasty followed by an ipsilateral pneumonectomy (TPP). Early mortality was 9 percent (five patients); 25 died during the observation period, mean survival time 18 years (5 to 30); 26 were still alive at the conclusion of our study, mean survival time 31.9 years (29 to 35). In 19 patients, repeated spirometry and blood gas determinations were available (Table 1).

The results of Bredin and our findings are comparable in the group of long-term survivors (Table 1). Sex, age at surgery and duration of follow-up are almost the same. The average height in our groups was: men 178 cm (SD 2.8), women 165 cm (SD 3.4). Predicted VC (VCp) used are comparable in the two papers. The VC%VCp is somewhat larger in the TPL group, possibly reflecting the presence of a "collapsed lung". The patients in the TPP group have a somewhat better FEV₁%VC, probably due to the fact that in Bredin's patients a partially compressed, partially destroyed lung was present, whereas in our cases the hemithorax was empty and collapsed.

The somewhat larger RV%TLC and FRC%TLC in the TPL group as compared to the TPP group may also point to the presence of the poorly ventilated lung under the thoracoplasty.

In our group of patients the blood gas values at rest were in the normal range: PaO₂, 75.5 mm Hg (SD 8.2), PaCO₂, 40.5 mm Hg (SD 5.3), pH 7.395 (SD 0.027) and HCO₃, 24.3 (SD 2.9).

The comparison of the long-term results of patients with an extensive thoracoplasty (TPL) with those of TPL and an additional ipsilateral pneumonectomy (TPP) seems to indicate that the remaining lung tissue after extensive thoracoplasty hardly contributes to the quality of pulmonary function; it possibly causes a somewhat impaired forced expiratory volume and a somewhat enlarged functional residual capacity. The normal blood gas values in the TPP group indicate that the presence of an extensive thoracoplasty does not significantly impair the V̇E/Q̇ relationship in the remaining lung.

C. J. J. Westermann, M.D.
Nieuwegein, The Netherlands

REFERENCES
1 Bredin CP. Pulmonary function in long term survivors of thoracoplasty. Chest 1989; 95:18-20
2 Laros CD. Pneumonectomy and additional thoracoplasty. A 30-year follow-up of a group of 56 patients. Selected Papers 1987; 23:5-18 (copies available by the Royal Netherlands Tuberculosis Association PB 146, 2501CC, The Hague)

To the Editor:

I am grateful for Dr. Westermann's comments including the interesting comparison of his data on 30-year survivors of thoracoplasty followed by pneumonectomy (TPP) and our own data on 30-year survivors of thoracoplasty alone (TPL). The more marked obstructive defect in the TPP group highlighted by Westermann is noted.

Arterial oxygen tension in our TPL group (mean 63.3 mm Hg, SD 18.5, n = 13) appears lower than in the TPP group, although there is some overlap. The mechanism of hypoxemia in the TPL subjects is probably via a greater impairment of V̇E/Q̇ relationships than in their TPP counterparts. This impairment—and the related one of increased obstruction in the TPP group—may both be attributed to the residual poorly functioning lung, under TPL.


Table 1 — Thoracoplasty (TPL) and TPL + Pneumonectomy Patients (TPP): Comparison of Lung Function Data 30 Years after the Last Intervention

<table>
<thead>
<tr>
<th></th>
<th>TPL (Bredin)</th>
<th>TPP (Laros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M &amp; f</td>
<td>12±3</td>
<td>12±7</td>
</tr>
<tr>
<td>N</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>Age at TPL/TPP</td>
<td>31</td>
<td>28.7</td>
</tr>
<tr>
<td>Age</td>
<td>60.6</td>
<td>60.6</td>
</tr>
<tr>
<td>N of ribs resected</td>
<td>6.4</td>
<td>7.4</td>
</tr>
<tr>
<td>VC%VCp</td>
<td>49.1</td>
<td>46.2</td>
</tr>
<tr>
<td>FEV₁%VC</td>
<td>57.6</td>
<td>66.1</td>
</tr>
<tr>
<td>RV%TLC</td>
<td>50.4</td>
<td>45.6</td>
</tr>
<tr>
<td>FRC%TLC</td>
<td>65.7</td>
<td>54.7</td>
</tr>
</tbody>
</table>