Case 1. A 22-year-old Caucasian woman was admitted because of malaise during the last 4 months and inflammatory back pain. At examination, blood pressure was 125/80 mm Hg, all pulses were symmetrically palpable, and an epigastric bruit was heard. Routine blood components showed hemoglobin 8.7 g/dl, MCV 80, white-cell count 11,200/µl, platelets 695,000/µl, ESR 120 mm/h, and C-reactive protein (CRP) 113 mg/l. A computed tomography (CT) scan demonstrated a wide aorta stenosis, and left internal carotid stenosis (Figure 1B). A diagnosis of TA was then established. The abdominal aneurysm was removed, and a Dacron prosthesis was implanted. Biopsy of the excised material showed arteritis with histiocytes, plasmatic cells, and lymphocytes. Prednisone 1 mg/kg/day was started and afterwards tapered, with improvement of the analytic and clinical measures.

Case 2. A 29-year-old Caucasian woman was admitted because of 2-month history of malaise, headache, and high blood pressure (190/120 mm Hg). Examination showed weak pulses in both radial arteries, while the rest was normal. Routine hematological and chemical blood components were normal and abdominal Doppler scan showed a small right kidney with a probable stenosis in the renal artery. A digital intravenous arteriography subtraction (DIVAS) scan demonstrated a stenosis in the infrarenal aorta, both primitive iliac arteries, and inferior mesenteric artery. Right renal artery was not visible (Figure 1C). The patient was treated with angiotensin-converting enzyme inhibitors in order to normalize blood pressure. No immunosuppressive treatment was started.

One year later, she became pregnant. During gestation she had preeclampsia as a complication, and was treated with atenolol and methyldopa. At the 38th week of gestation, cesarean section was performed because of growth retardation. The newborn girl’s weight was 2065 g and initial Apgar test was 9/10. She developed respiratory distress and neonatal sepsis was suspected. Antibiotic therapy was maintained for 7 days until all cultures were negative. The baby also presented jaundice, which was treated with phototherapy. There were no more complications.

It must be pointed out that all 4 pregnancies were successful. However, they all finished with cesarean section and some complications such as gestational diabetes and preeclampsia were observed. No newborns, except 1 with intrauterine growth retardation, respiratory distress, and abnormal jaundice, had any complication attributable to the mother’s disease.

Among the previous reported cases of TA and pregnancy (Table 1), most of them among Asian women, a significant incidence of abortions is noted (15%), although the majority were uncomplicated pregnancies and deliveries. Only 1 neonatal death is described. Eight percent of the newborns were premature and low birth weight was a frequent situation (15%). Preeclampsia/high blood pressure were observed in a large proportion of patients (39%). Exacerbation of the disease during pregnancy has been mentioned, but it is not the rule. In contrast, it has been pointed out that a higher frequency of cardiovascular events might be seen. Cesarean section was performed in only 23% of cases in the literature. Thus, it is not systematically recommended. Regarding our patients, it was always performed because of gynecologic indication and not because of TA per se.

High blood pressure in the late gestational period, abdominal and renal involvement, disease activity during the early pregnancy, and delay in medical attention are described as some of the predictor factors of a bad outcome. The lowest possible dose of corticosteroids to control the dis-
ease is recommended. Azathioprine, which seems to be one of the safest immunosuppressive options, although associated with prematurity, should be considered in the few cases that might not respond to corticosteroids. Other therapies usually employed in TA, such as methotrexate, are forbidden in pregnancy. Therefore, their use must be accompanied by effective contraceptive measures\textsuperscript{10}.

TA is not a major contraindication for pregnancy in either Caucasian or Asian patients, as long as the disease is clinically stable\textsuperscript{11}. According to previous experience, the disease does not worsen because of pregnancy\textsuperscript{7}, although it conveys substantial morbidity. Thus, it requires careful control by a multidisciplinary team with close monitoring of pregnancy and special attention to blood pressure.

ORIOL GASCH, MD; ANTONIO VIDALLER, PhD; RAMON PUJOL, PhD, Internal Medicine Service, Hospital de Bellvitge, Barcelona, Spain.

Address reprint requests to Dr. Gasch. E-mail: urigasch@hotmail.com

REFERENCES

Table 1. Takayasu arteritis and pregnancy series.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Preeclampsia/ HBP</th>
<th>LHF</th>
<th>Postpartum Septicemia</th>
<th>Maternal Death</th>
<th>IUGR/Low Birth Weight</th>
<th>Prematurity</th>
<th>Abortion/ Intrauterine Death</th>
<th>Neonatal Deaths</th>
<th>Cesarean Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aso\textsuperscript{4}</td>
<td>23</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Sharma\textsuperscript{5}</td>
<td>24</td>
<td>11</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Wong\textsuperscript{6}</td>
<td>30</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Ishikawa\textsuperscript{7}</td>
<td>33</td>
<td>15</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Kerr\textsuperscript{8}</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Matsumura\textsuperscript{9}</td>
<td>22</td>
<td>4</td>
<td>1</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>2</td>
<td>NA</td>
<td>1</td>
</tr>
<tr>
<td>Total (%)</td>
<td>137</td>
<td>54 (39)</td>
<td>5 (4)</td>
<td>2 (1)</td>
<td>0</td>
<td>20 (15)</td>
<td>11 (8)</td>
<td>20 (15)</td>
<td>1 (0.7)</td>
<td>31 (23)</td>
</tr>
</tbody>
</table>

n: Total number of pregnancies; HBP: high blood pressure; IUGR: intrauterine growth retardation; NA: not applicable; LHF: left heart failure.