Delay in the Diagnosis of Conn’s Syndrome: A Single-Center Experience Over 30 Years

To the Editor:

The study reported by Rossi et al[1] addressed predictors of outcome in aldosterone-producing adenoma (APA) patients postadrenalectomy. The time-dependent process of adverse vascular remodeling, determined by an increased media/lumen ratio of resistance arteries, was hypothesized to predict a poorer response to adrenalectomy. Indeed, the media/lumen ratio and the known duration of hypertension were significant predictors of response to adrenalectomy in APA patients who were categorized into cured, markedly improved, or mildly improved subgroups. In particular, the mean duration of hypertension in the 3 groups was 2.6±0.9, 8.0±1.3, and 17.3±5.0 years, respectively.

We encountered a patient who was referred to us for investigation of hypertension 15 years after first diagnosis. We confirmed an APA, diameter 3.8 cm, possibly the largest APA in the English literature. We therefore investigated whether the duration of hypertension was related to tumor size, but we found no relationship. We investigated a total of 19 patients with APA and 10 patients with idiopathic hyperaldosteronism (IHA) from our center over the past 30 years. The Table shows the delay in referral from primary care to the hypertension clinic (delay 1), the delay in diagnosis of APA/IHA within the hypertension clinic (delay 2), and the total duration of hypertension to diagnosis of APA/IHA (total delay). We found that the duration of pre-existing hypertension to diagnosis in our APA patients was 8.1±1.8 years, which was very similar to the subgroup of APA patients reported by Rossi et al whom underwent adrenalectomy resulting in a markedly improved BP outcome. The diagnosis of APA was made within 1 year (0.8±0.3 years) of attending our hypertension clinic so most of the delay occurs within the primary care setting (7.2±1.6 years).

APA patients with an extensive history of pre-existing hypertension are likely to have associated target organ damage in the kidney and vasculature, thus contributing to persistent hypertension despite successful adrenalectomy. Indeed, those APA patients reported by Rossi et al[1] who were cured by adrenalectomy, had pre-existing hypertension for a mean duration of <3 years. Furthermore, Fukudome et al[3] reported a mean duration of pre-existing hypertension of 6 years in their APA patients cured by adrenalectomy and 10 years in those who were not cured.

Primary hyperaldosteronism is the most common endocrine cause of hypertension. Our observations, along with those reported by Rossi et al,[1] emphasize that increased awareness is necessary by primary health care professionals to minimize the delay in diagnosis and achieve a prompt surgical cure.

Disclosures

None.

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Table. Delay in the Diagnosis of Conn’s Syndrome

<table>
<thead>
<tr>
<th>Variable</th>
<th>APA, n=19, Mean±SEM</th>
<th>IHA, n=10, Mean±SEM</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, y</td>
<td>47±3</td>
<td>54±2</td>
<td>0.10</td>
</tr>
<tr>
<td>Delay 1, y</td>
<td>7.2±1.6</td>
<td>7.6±2.6</td>
<td>0.91</td>
</tr>
<tr>
<td>Delay 2, y</td>
<td>0.8±0.3</td>
<td>1.5±0.7</td>
<td>0.30</td>
</tr>
<tr>
<td>Total delay, y</td>
<td>8.1±1.8</td>
<td>9.1±2.4</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Data show the delay in referral from primary care to the hypertension clinic (delay 1), delay in diagnosis of APA/IHA within the hypertension clinic (delay 2), and the total duration of hypertension to diagnosis (total delay). Comparison between APA and IHA patients was performed using a standard t test.

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