Chromogranin A Measurement For Assessing
The Selectivity Of Adrenal Venous Sampling In Primary Aldosteronism

Supplemental data

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Captions

Fig. 1S. Plasma aldosterone (PAC, Panel A) and cortisol (PCC, Panel B) concentrations in the infrarenal inferior vena cava (IVC) and in the right and left adrenal vein blood at time t-15 and t0. A step-up between the IVC and either adrenal vein blood was clearly evident at both times. The median value corresponds to the line inside the box, which indicates interquartile range; whiskers correspond to min and max.

Fig. 2S. The percentage of selective adrenal venous sampling (AVS) identified with selectivity index calculated with cortisol (PCC-SI) and chromogranin A (ChA-SI) values on the right and left side and bilaterally using less restrictive cut-offs of 1.5 and 2 was likewise much smaller at both t-15 (panels A and C) and t0 (panels B and D) using the ChA-SI than using the PCC-SI.

Fig. 3S. Panel A: a Bland and Altman plot of the raw selectivity index calculated with chromogranin A (ChA-SI) and cortisol (PCC-SI) values evidenced that a) the mean value of the difference between PCC-SI and ChA-SI differed from 0; b) the data were not symmetrically distributed around the mean; c) the difference between PCC-SI and ChA-SI proportionally increased along with the average of PCC-SI and ChA-SI. This distribution indicates the existence of a within-patient values proportional error. No difference between values obtained at t-15 (open symbols) and t0 (closed symbols) was observed. Panel B: The funnel shape of the Bland and Altman plot of the Z scores of PCC-SI and ChA-SI, which allows eliminating any bias due to the different absolute values furnished by the two assays, confirms that the variation of one method strongly depends on the magnitude of the measurements.
Table 1. Plasma Levels of Chromogranin A and Cortisol measured in each patient at t0 and t-15 during adrenal vein sampling in the infrarenal inferior vena cava (IVC) and in the adrenal vein blood.

<table>
<thead>
<tr>
<th>Case</th>
<th>Chromogranin A (μg/L)</th>
<th>Plasma Cortisol Levels (μg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Right</td>
<td>Left</td>
</tr>
<tr>
<td></td>
<td>t-15</td>
<td>t0</td>
</tr>
<tr>
<td>1</td>
<td>24.0</td>
<td>23.0</td>
</tr>
<tr>
<td>2</td>
<td>26.0</td>
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<tr>
<td>3</td>
<td>42.0</td>
<td>42.0</td>
</tr>
<tr>
<td>4</td>
<td>43.0</td>
<td>46.0</td>
</tr>
<tr>
<td>5</td>
<td>23.0</td>
<td>23.0</td>
</tr>
<tr>
<td>6</td>
<td>39.0</td>
<td>45.0</td>
</tr>
<tr>
<td>7</td>
<td>17.0</td>
<td>42.0</td>
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<tr>
<td>8</td>
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<tr>
<td>9</td>
<td>9.0</td>
<td>4.0</td>
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<tr>
<td>10</td>
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<td>15.0</td>
</tr>
<tr>
<td>11</td>
<td>27.0</td>
<td>26.0</td>
</tr>
<tr>
<td>12</td>
<td>9.0</td>
<td>4.0</td>
</tr>
<tr>
<td>13</td>
<td>39.0</td>
<td>34.0</td>
</tr>
</tbody>
</table>

To convert to SI units (nmol/L), multiply ng/dL of PCC for 27.62.
**Fig. 1**

A

- t-15
- t0

* p < 0.05 vs IVC
** p < 0.01 vs IVC

PAC (ng/dL) vs IVC

B

- PCC (µg/L)

p < 0.01

NS

p < 0.01 vs IVC
Fig. 2

**Selective AVS identified with PCC SI**

Selectivity cut-off = 1.5

<table>
<thead>
<tr>
<th></th>
<th>Selective AVS at t-15 (%)</th>
<th>Selective AVS at t0 (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCC</td>
<td>84% 15%</td>
<td>84% 15%</td>
<td>0.0001</td>
</tr>
<tr>
<td>ChA</td>
<td>100% 46%</td>
<td>76% 15%</td>
<td>0.0001</td>
</tr>
<tr>
<td>Bilaterally</td>
<td>84% 15%</td>
<td>92% 30%</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Selectivity cut-off = 2

<table>
<thead>
<tr>
<th></th>
<th>Selective AVS at t-15 (%)</th>
<th>Selective AVS at t0 (%)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCC</td>
<td>84% 0%</td>
<td>76% 7%</td>
<td>0.0001</td>
</tr>
<tr>
<td>ChA</td>
<td>92% 15%</td>
<td>76% 7%</td>
<td>0.0001</td>
</tr>
<tr>
<td>Bilaterally</td>
<td>76% 7%</td>
<td>69% 7%</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

**Selective AVS identified with ChA SI**

- Black: Selective AVS identified with PCC SI
- Gray: Selective AVS identified with ChA SI
- White: Non selective AVS
AVERAGE of Z SI ChA and Z SI PCC

Z SI ChA - Z SI PCC

Mean

+1.96 SD

-1.96 SD

PCC-SI - ChA-SI

Average of PCC-SI and ChA-SI

Mean

+1.96 SD

-1.96 SD

AVERAGE of SI_ChA and SI PCC

SI_ChA - SI PCC

Mean

+1.96 SD

-1.96 SD

Average of Z PCC-SI and Z ChA-SI

Z PCC-SI - Z ChA-SI

Mean

+1.96 SD

-1.96 SD

A

B

Fig. 3