P-556
CT-GUIDED TREATMENT OF FUNCTIONING SR-ADENOMAS: A COMPARATIVE STUDY BETWEEN ETHANOL INJECTION AND RADIOFREQUENCY
Paulo Almeida, Guilherme Augusto Mariano Pego, Luís Augusto Providência. Radiology, Coimbra University Hospital, Coimbra, Coimbra, Portugal; Cardiology, Coimbra University Hospital, Coimbra, Coimbra, Portugal; Cardiology, Coimbra University Hospital, Coimbra, Coimbra, Portugal.

Purpose: We compared the results of the treatment of functioning SR adenomas using percutaneous ethanol injection (PEI) in 54 patients in the last four years and radiofrequency thermal ablation (RFTA) in 16 patients in the last one a half year.

Material and Methods: We analysed and compared clinical improvement including blood pressure (BP), lab values of plasma renin activation (PRA), plasma concentration of aldosterone (PCA), reduction of drugs intake and correlated age and time of high BP diagnosis in each one of the methods. Complications and hospital stay were also compared.

Results: Results consisted in clinical control of PRA, PCA and PCA/PRA values and BP measurements six months after the therapeutical procedures. By PEI we achieved normal BP in 33 patients (61.1%). In the remaining patients of this group, we reduced the diary intake of antihypertensive drugs in 16; in 5 patients we didn’t get any results. This means that we could obtain by this method a good result in an overall of 49 of the 54 patients. In the group treated by RFTA we achieved normal BP in 11 patients (68.7%). From the remaining 5, one is still taking three drugs, two are taking two, and one is taking one drug for the control of BP. The hospital stay was meanly 3 days for both methods.

Conclusion: The results obtained by RFTA are comparable to those achieved by PEI (the difference is not statistically significant). Both methods have reduced costs, are easy to accomplish and less invasive than surgery; they are better accepted by the patients improving significantly their quality of life.

Key Words: Secondary Hypertension, Ethanol Treatment, Radiofrequency Treatment

P-557
TREATED ATHEROSCLEROTIC RENOVASCULAR HYPERTENSION IS A CORONARY HEART DISEASE EQUIVALENT
William J. Elliott, Department of Preventive Medicine, RUH University Medical Center, Chicago, IL.

Survival in renovascular hypertension (RVH) is reduced compared to treated essential hypertension (EH), but how this compares to atherosclerotic disease in another vascular bed is not known. We compared all-cause mortality among patients with successfully-treated RVH using angioplasty±stents, and patients with EH who were extensively evaluated for coronary heart disease (CHD) from the same clinic during the same time period (1987–92). These were subdivided into four groups: 14 with both RVH and CHD (age 68±6 years, 64% men, 36% white); 45 with RVH, but no CHD (age 61±11 years, 22% men, 56% white); 284 with CHD but no RVH (age 62±12 years, 43% men, 19% white), and 142 with neither (age 54±12 years, 37% men, 17% white). The index date was the date of diagnosis or exclusion of RVH or CHD, whichever came later. Following IRB approval, follow-up data about all-cause mortality was gathered by mailed questionnaire, telephone, or through the Social Security Death Index (mean possible follow-up: 14±2 years).

Survival was compared by log-rank tests; Cox proportional hazards regression was used to adjust for baseline differences between groups. Mortality rates were shown in the Table. Even after adjustment for baseline differences in age, gender, race/ethnicity, and initial systolic blood pressure, there were large and significant differences in survival between all groups except those with RVH (but no CHD) and those with CHD (but no RVH). These data suggest that treated renovascular hypertension has a prognosis no different than coronary heart disease, and should be considered a “CHD equivalent.”

<table>
<thead>
<tr>
<th>RVH</th>
<th>CAD</th>
<th>Mortality</th>
<th>Relative Risk (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>+</td>
<td>9/14</td>
<td>6.3 (3.4–11.7)</td>
</tr>
<tr>
<td>+</td>
<td>−</td>
<td>12/45</td>
<td>2.8 (1.5–5.5)</td>
</tr>
<tr>
<td>−</td>
<td>+</td>
<td>102/284</td>
<td>3.5 (2.1–5.8)</td>
</tr>
<tr>
<td>−</td>
<td>−</td>
<td>15/142</td>
<td>1.0 (referent)</td>
</tr>
</tbody>
</table>

Key Words: Renal Artery Stenosis, Prognosis, Coronary Heart Disease

P-558
SPONTANEOUS RENAL ARTERY DISSECTION: A SYSTEMATIC APPROACH TO DIAGNOSIS AND TREATMENT
Esther L. Fields, Stanislav P Stawicki, James D Balshi. Department of Medicine, St Luke’s Hospital, Bethlehem, PA; Department of Surgery, St Luke’s Hospital, Bethlehem, PA.

Introduction: Spontaneous renal artery dissection (SRAD) is rare. Presentation varies from minimal symptomatology to life-threatening hypertension (HTN). Existing literature offers no consistent recommendations regarding the treatment of SRAD. We set out to analyze a case from our institution and case reports from the world literature in order to design diagnostic and treatment algorithms for SRAD.

Methods: A case of SRAD from our institution is presented. Additional 127 cases of SRAD from the world literature are included. Resulting findings were analyzed and diagnostic and treatment algorithms were designed.

Case Report: A 37-year old man presented with left flank pain and hematuria of 24 hours duration. Computed tomography (CT) of the abdomen was suspicious for left renal infarct. Magnetic resonance angiography (MRA) showed a focal lesion in a segmental branch of the left renal artery. Subsequent arteriography demonstrated an area of left renal artery dissection with aneurysmal dilatation of the adjacent segment. The patient recovered without sequelae after several days of inpatient observation.

Results: SRAD most frequently presents with a clinical triad of flank pain, hematuria and HTN. SRAD was more common in men (108/128). Mean patient age was 43.7 years. Initial diagnostic approach most often utilized a combination of intravenous pyelography (44/128), CT (15/128), ultrasonography (7/128), MRI/MRA. Arteriography constituted the most commonly used diagnostic modality (105/128). Treatment of SRAD centers around control of HTN and preservation of renal parenchyma. Non-operative treatment/clinical observation were sufficient in 38/128 of cases. Arterial bypass (intra- or extracorporeal) was the most commonly utilized surgical modality (50/128). Nephrectomy (28/128) was utilized in life-threatening emergencies, cases of profound renal parenchymal loss, and failed vascular bypass attempts. Endovascular techniques were used in 3/128 cases.

Conclusion: Early recognition and treatment of SRAD may be important to successful clinical outcome. Despite new imaging modalities, arteriography remains the gold standard for diagnosis of SRAD. Control of associated HTN is the main goal of medical treatment. Arterial bypass is indicated in cases of failed medical therapy. Partial or total nephrectomy is indicated in cases of significant renal parenchymal damage with concurrent severe HTN.

Key Words: Renal Artery Dissection, Algorithm, Diagnosis and Treatment