



## Drug Eluting Stents in the Renal Artery Bifurcation Lesions: Simultaneous Kissing Stent Technique

Elbey MA<sup>1\*</sup> and UI Haq F<sup>2</sup>

<sup>1</sup>Department of Internal Medicine, Saint Mary's Hospital, Waterbury, CT, USA

<sup>2</sup>Department of Interventional Cardiology, Saint Mary's Hospital, Waterbury, CT, USA

### Case Presentation

A 37-year-old female with bilateral renal artery stenosis and stenting bilaterally was performed in another center 2 years ago. The patient was applied our medical emergency clinic with pulmonary edema. The blood pressure was 190/120 mmHg despite pharmacologic therapy of Metoprolol 50 mg, Spironolactone 25 mg, Doxazosin 4 mg, and Amlodipine 10 mg. Her creatinine level was 1.3 mg/dL in the emergency department.

Renal angiography was performed for evaluation of renal arteries stents. Left renal artery stent was total occluded from proximal part (Figure 1A) and right renal artery stent was open but there were severe stenosis of the right renal artery bifurcation involving upper and lower branches (80%



**Figure 1:** A) Total occlusion of left renal artery and occluded previous implanted stent. B) Shows bifurcation lesion of right renal artery.

### OPEN ACCESS

#### \*Correspondence:

Mehmet A Elbey, Department of Internal Medicine, Saint Mary's Hospital, Waterbury, CT 06706, USA, Tel: 203 709 6000;

E-mail: malielbey@gmail.com/ Mehmet.

Elbey@trinityhealthofne.org

Received Date: 02 Jan 2023

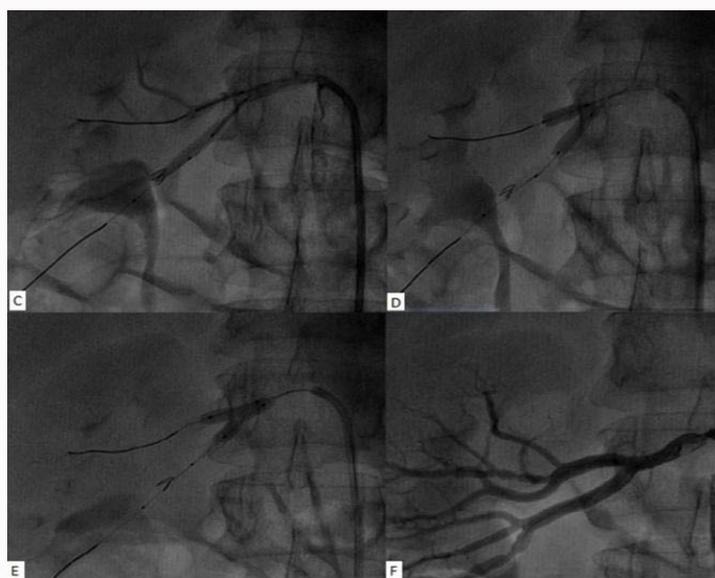
Accepted Date: 19 Jan 2023

Published Date: 24 Jan 2023

#### Citation:

Elbey MA, UI Haq F. Drug Eluting Stents in the Renal Artery Bifurcation Lesions: Simultaneous Kissing Stent Technique. *Clin Case Rep Int.* 2023; 7: 1464.

**Copyright** © 2023 Elbey MA. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



**Figure 2:** C) Post-dilatation image with two drug eluting stents placement, D) Two stents implantation with "simultaneous kissing stenting technique" image, E) Post-dilatation with two NC balloons image, F) Final result.

and 70%, respectively) (Figure 1B). There was also 40% plaque in the ostial right renal artery. Procedure was performed to right renal artery bifurcation lesion. After procedure blood pressure was dropped Doxazosin and Amlodipine was stopped. Aspirin and Clopidogrel were added to patient's medication. Her creatinine level decreased to 0.95 mg/dL the 2 days after the procedure and patient was discharged without any procedure-related complications. Left renal scintigraphy was performed at 3-months' follow-up but it was not alive. There was no evidence of restenosis on Doppler ultrasonography follow-up 6 months.

## Procedure

A 7-F vascular sheath was placed into the left femoral artery and 7-F guiding catheter advanced to the right renal artery ostium. One

soft guide wire was placed into upper branch vessel of renal artery. An embolic protection device was placed the distal part of the lower branch (Figure 2C). A semi-compliant balloon (2.5 mm × 15 mm) was inflated in the upper and bottom branches respectively. Then, two drug eluting stents 3.5 mm × 12 mm were positioned to each branch (Figure 2C). Two stents together were performed at the nominal pressure just after previous implanted bare metallic stent (Figure 2D). Then two stent balloons were removed and two non-compliant balloons (NS, 3.5 mm × 12 mm) were inflated for post-stent dilatation at the high pressure (Figure 2E). No further procedure was needed for ostial lesion. Distal protection device was removed safely. The final angiogram proved to be a successful result (Figure 2F).