

Results of Endovascular Treatment of Superior and Inferior Vena Cava at Mid-Term Follow-Up (Up to 65 Moths)

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ABSTRACT

Aim: The aim of this study is to report our experience in endovascular treatment of superior and inferior vena cava syndrome.

Methods: Between June 2013 and August 2019, 52 patients (mean age 54.75 years; minimum 20yo, maximum 81yo) were endovascularly treated with self-expandable stents of stenosed superior (78.8% - 41 pts) or inferior (21.2% - 11 pts) vena cava. All patients presented with vena cava obstruction syndrome. Complete occlusion was found in 30.8% - 16pts and mean percent of stenosis was 89.92%. The two main causes of the caval obstructions were carcinoma (82.7%, 43pts) and thrombophilia (7.7%, 4 pts) (Figure 1).

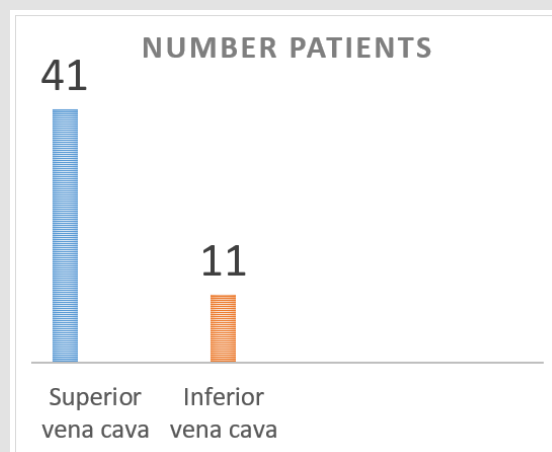


Figure 1.

Introduction

- Treatment and complications Successful procedures were 97.8%.
- Balloon predilatation.
- Stent placement – self expandable stents (Sinus XL, Protégé, Abre).
- Balloon postdilatation.
- Two major complications (3.8%).
- Thrombus migration causing pulmonary embolism (Figure 2).

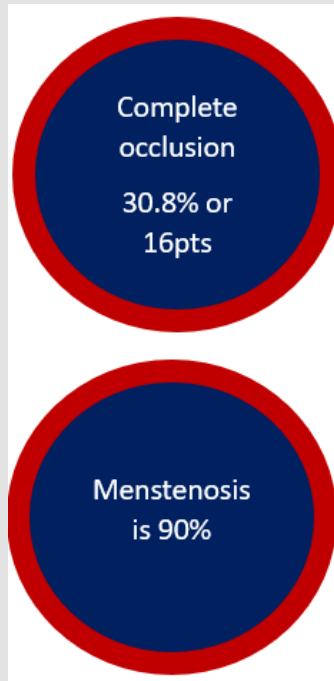


Figure 2: Epidemiology.

Both of them treated endovascularly with thrombus fragmentation, local fibrinolysis and aspiration. In nearly all patients stents were placed (97.8%) and there was clinical improvement of the caval syndrome- considerable reduction of edema and symptom relief in the treated patients. Of all 52 procedures we had two major intra-procedural complications (3.8%) – both migration of thrombus material causing pulmonary embolism, which was treated with intrapulmonary thrombus fragmentation and thrombolysis. All patients were clinically followed-up; 59.6% were followed-up by CT scan or flow Doppler ultrasound up to 65 months after procedure, with a median

follow up period of 1 month (30-1950 days). Stent patency was 93.5% (29 pts); significant stent restenosis or occlusion were found in 2 cases (6.5%) and were successfully treated endovascularly (Figure 3).

Results

- All patients had relief of vena cava syndrome.
- All patients were clinically followed up – up to 65 months.
- Median follow up period was 1 month (30-1950 days).
- CT - scan or Doppler ultrasound follow up was done in 59.6% of patients (Figure 4) [1-4].

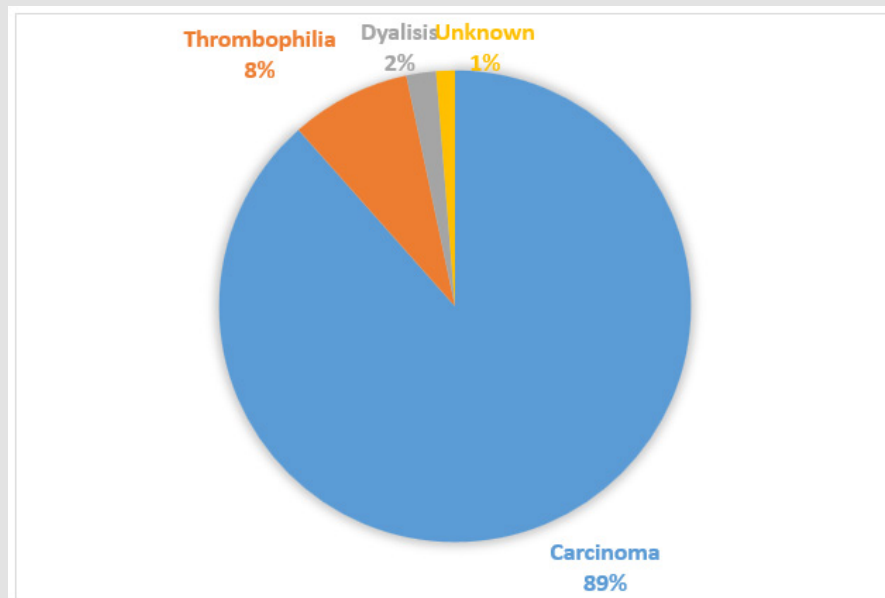


Figure 3: Most of the patients had carcinoma (lung, pancreatic, mediastinal) with most of them with short life expectancy and the procedure was palliative to ameliorate the cava syndrome.

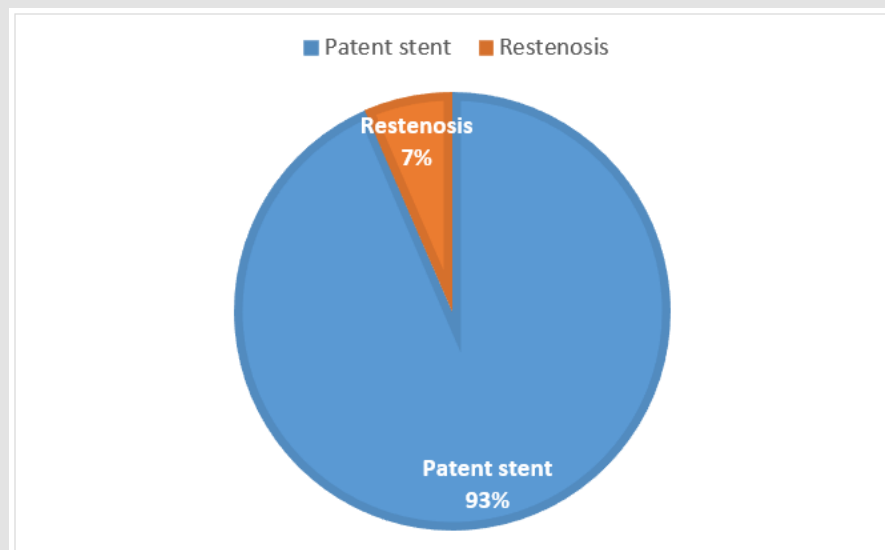


Figure 4: We had 7% restenosis rate (2patients) – both had successful reinterventions Stent patency was 93%.

Conclusion

Endovascular treatment with stent implantation for superior and inferior vena cava syndrome is a minimal invasive and safe procedure with favorable clinical effect and satisfactory mid-term result.

References

1. Petrov I, Tasheva I (2018) UMBAL Ajibadem City Clinic. Cardiovascular Center, Sofia, Bulgaria.
2. Zimmerman S, Davis M (2018) Rapid Fire: Superior Vena Cava Syndrome. *Emerg Med Clin North Am* 36: 577-584.
3. Carmo J, Santos A (2018) Chronic Occlusion of the Superior Vena Cava. *N Engl J Med* 379: 2.
4. Nakano T, Endo S, Kanai Y, Otani S, Tsubochi H, et al. (2014) Surgical outcomes after superior vena cava reconstruction with expanded polytetrafluoroethylene grafts. *Ann Thorac Cardiovasc Surg* 2: 310-315.

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