INITIAL EXPERIENCE OF SIOXX XL STENT: USE IN OCCLUSIVE VENOUS DISEASES.

ALTINO ONO MORAES, MD
Disclosure

Speaker name:

DR ALTINO ONO MORAES

I have the following potential conflicts of interest to report:

- Consulting by SCITECH
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest
Moraes, AO;
Viotto, EF;
Queiroz, AG;
Proença, S;
De Paula, MF.

INSTITUTO DE MOLÉSTIAS VASCULARES DE MARINGÁ
1) WITH THE IMPROVEMENT OF COMPLEMENTARY DIAGNOSTIC METHODS, SUCH AS DUPLEX SCAN, TODAY WE DO MUCH MORE DIAGNOSIS OF VENOUS OCCLUSIVE DISEASE, DISEASES SUCH AS MAY-THURNER AND NUT CRACKER SYNDROME.

2) PATHOLOGIES THAT CHANGED THE TYPE OF TREATMENT WITH THE APPEARANCE OF THE MOST MODERN ENDOVASCULAR THERAPIES AND DEDICATED STENTS FOR USE IN THE VENOUS TERRITORY.
OBJECTIVE

TO EVALUATE AND MONITOR PATIENTS UNDERGOING ENDOVASCULAR TREATMENT USING THE SIOXX XL STENT.
CAN ARTERIAL STENTS BE USED FOR VENOUS TREATMENT?

- ARTERIAL AND VENOUS ANATOMY DIFFER GREATLY IN PHYSIOLOGICAL AND PATOPHYSIOLOGICAL CONDITIONS WITH REGARD TO HEMODYNAMIC:
  
1. STRESS,
2. SIZE OF THE VESSEL,
3. FLEXIBILITY.

CAN ARTERIAL STENTS BE USED FOR VENOUS TREATMENT?

- RECENT STUDIES WITH SELF EXPANDABLE NITINOL STENTS, DESIGNED FOR ARTERY IN A POPULATION OF MOST POST-THROMBOTICAL POPULATION, SHOWED PATENCY FEATURES OF 74%, 81%, AND 96% IN 1 YEAR FOR PRIMARY, PRIMARY ASSISTANCE, AND SECONDARY PATENCY, RESPECTIVELY.

WHAT DO WE NEED IN A VENOUS STENT?

- LARGE LENGTHS AND DIAMETERS,
- FLEXIBILITY,
- RADIAL FORCE IN THE VENOUS SYSTEM.
VENOUS STENT

- STENT SIOXX
- SIZE 14-22 MM
- SCITEC – BRAZILIAN CO.

**Sioxx**

- Unmatched flexibility to adapt to the vessel wall;
- Open cell structure;
- Surface smooth and with rounded edges;
- 4 radiopaque markers tantalam;
- Sheath wireframe for better navigability and kink resistance;
- Delivery system easily handled with the technical / pull back;
- Delivery system with soft and tapered tip.

**Self Expanding Nitinol Stent System**
- Nitinol -open cell Structure
- Guide wire: 0.035"
- Sheath Introducer: 12Fr
- Self Expandable
- Delivery System: 100cms
Short-Term Clinical Experience with a Dedicated Venous Nitinol Stent: Initial Results with the Sinus-Venous Stent

M.A.F. de Wolf a,*, R. de Graaf b, R.L.M. Kurstjens a, S. Penninx a, H. Jalaie c, C.H.A. Wittens a,c

a Department of Vascular Surgery and Cardiovascular Research Institute Maastricht, Maastricht University Medical Centre, Maastricht, The Netherlands
b Department of Radiology, Maastricht University Medical Centre, Maastricht, The Netherlands
c Department of Vascular Surgery, University Hospital RWTH Aachen, Aachen, Germany

WHAT THIS PAPER ADDS
Endovascular treatment in patients with deep venous occlusive or obstructive disease, by PTA and stent placement, is an emerging field; however, dedicated venous stents have only recently become available. This study describes a first experience with one such device, the sinus Venous stent. This device distinguishes itself from previously used stent designs aimed at the arterial system by increased radial force and flexibility, and greater diameter and length. It is postulated that dedicated venous stents will become the new standard for treatment of venous compression and post-thrombotic syndromes in the future.
Objective: Deep venous stenting has become the primary treatment option for chronic venous obstructive disease, both for iliac vein compression and post-thrombotic venous lesions. Until recently, only stents aimed at arterial pathology were used, because no dedicated venous stents were available. However, three such stents have now become available. These venous stents are characterized by increased length, diameter, flexibility, and radial force. This study reports an early experience with one of these devices; the sinus Venous stent (OptiMed GmbH, Ettingen, Germany).

Methods: Between March 2012 and July 2014, 75 patients were treated with the sinus Venous stent: 35 cases of iliac vein compression syndrome and 40 cases of unilateral chronic obstruction in post-thrombotic syndrome (PTS). Diagnosis of relevant obstruction was made using clinical evaluation, duplex ultrasound, and magnetic resonance venography. Patency during follow up was assessed with duplex ultrasound. Clinical improvement was assessed by VCSS, Villalta score, rate of ulcer healing, and improvement of venous claudication.

Results: The cumulative patency rates at 3, 6, and 12 months were 99%, 96%, and 92%, respectively. The cumulative assisted primary patency rates were 99% at 3, 6, and 12 months. The cumulative secondary patency rate at 12 months was 100%. Differences exist in patency rate between the subgroups of non-thrombotic and post-thrombotic, with the first showing no re-occlusions. All re-thromboses in the PTS group were treated by ancillary treatment modalities. VCSS and Villalta score decreased significantly after stenting, as did venous claudication. Morbidity was low without clinically relevant pulmonary embolism, and mortality was nil. Although two out of seven ulcers healed temporarily, no ulcer remained healed at 12 months follow up.

Conclusion: Short-term clinical results using the sinus Venous stent are excellent, with significant symptom reduction, low morbidity rates, and no mortality. Loss of stent patency is seen less often compared with arterial stents described in the literature.

© 2015 European Society for Vascular Surgery. Published by Elsevier Ltd. All rights reserved.
Article history: Received 18 August 2014, Accepted 22 May 2015, Available online 14 July 2015
Keywords: Deep venous thrombosis, Iliac vein compression syndrome, May-Thurner syndrome, Post-thrombotic syndrome, Sinus Venous, Stent
METHOD

- PROSPECTIVE, NON-RANDOMIZED, SINGLE ARM STUDY
- FROM JULY 2015 TO JULY 2017
- PATIENTS ATTENDED AT THE VASCULAR SURGERY OUTPATIENT MARINGA HOSPITAL
- MEAN AGE OF 45.88 Y
- 17 PATIENTS
METHOD

PATOLOGIAS

- MAY THURNER SYNDROME 59%
- NUT CRACKER SYNDROME 29%
- THORACIC OUTLET SYNDROME 12%
RESULTS

• PRIMARY PATENCY AT 12 MONTHS WAS 88.17% AND SECONDARY PATENCY WAS 90%.

• THERE WAS A REGRESSION OF SYMPTOMS IN 94.11% OF PATIENTS IN THE FIRST 30 DAYS.

• 3 PATIENTS GOT PREGNANT. STENT REMAINS PATENT WITHOUT DEFORMATION AND OCLUSION.
CASE 1

- MAY THURNER SYNDROME
- ATTEMPT TO PASS FOR THE FEMORAL VEIN WITHOUT SUCCESS
- ACCESS BY THE JUGULAR VEIN
CASE 1
CASE 1
CASE 2

- FEMALE, 25Y
- MAY THURNER SYNDROME
- DVT
CASE 2
CASE 3

- FEMALE, 18Y
- NUT CRACKER SYNDROME
- SYMPTOMATIC – ABDOMINAL PAIN
CASE 3
CONCLUSION

1- PRIMARY AND SECONDARY FOLLOW-UP PRESENTED GOOD RESULTS WHEN COMPARED TO CURRENT LITERATURE

2- THE SIOXX XL IS EASY TO USE WITH EXCELLENT NAVIGABILITY AND FLEXIBILITY.
THANK YOU FOR YOUR ATTENTION