XXIX CONGRESO NACIONAL CACI2019 Pilar

CP STENT; AMPLIANDO LAS INDICACIONES MEDICAS

OMNIMEDICA

TCP. JULIO CESAR ROMERO SALCEDO
OMNIMEDICA S.A.

CP STENT®.

NuMED

- Platino / Iridio de 0.013
- Patrón de Zig
- Soldadura de oro 24k
- PTFE (Politetrafluoroetileno)

La configuración de 8 zig permite la expansión de 10 mm a 24 mm, y la configuración de 10 zig permite la expansión de 26 mm a 30 mm.

BIB® (Balloon in Balloon)

Indicado para la colocación del stent en vasos mayores de 8 mm de diámetro.

-Diseño triaxial.

-Marcador radio opaco de Platino.

-Presión Especifica.

-Se suministra esterilizado con gas de óxido de etileno.

Stent Configuration (Number of Zigs)	Inflated Balloon Diamter (mm)	Stent Length (cm)								
		1.6	2.2	2.8	3.4	3.9	4.5	5	5.5	6
		Stent Length After Expansion (PERCENTAGE SHORTENING)								
8 ZIG	12	1.61cm (2.8%)	2.18cm (0.8%)	2.62cm (4.4%)	3.23cm (3.1%)	3.72cm (1.9%)	4.17cm (3.8%)	4.71cm (6.2%)	5.25cm (5.0%)	5.84cm (4.5%)
	14	1.54cm (6.5%)	2.08cm (5.4%)	2.56cm (6.8%)	3.15cm (5.4%)	3.66cm (3.6%)	3.97cm (8.4%)	4.58cm (8.7%)	5.11cm (7.6%)	5.67cm (7.3%)
	15	1.51cm (8.5%)	2.02cm (7.9%)	2.51cm (8.6%)	3.10cm (7.0%)	3.54cm (6.6%)	3.94cm (9.2%)	4.50cm (10.3%)	4.98cm (10.0%)	5.55cm (9.2%)
	16	1.48cm (10.6%)	1.98cm (10.1%)	2.45cm (10.7%)	3.00cm (9.8%)	3.48cm (8.2%)	3.84cm (11.4%)	4.42cm (11.9%)	4.91cm (11.2%)	5.43cm (11.2%)
	18	1.43cm (13.7%)	1.89cm (14.0%)	2.38cm (13.3%)	2.88cm (13.5%)	3.20cm (15.6%)	3.71cm (14.5%)	4.21cm (16.1%)	4.70cm (15.1%)	5.20cm (14.9%)
	20	1.32cm (20.0%)	1.80cm (17.9%)	2.30cm (16.3%)	2.63cm (20.9%)	2.96cm (21.9%)	3.27cm (24.7%)	3.96cm (21.0%)	4.43cm (20.00%)	4.92cm (19.5%)
	22	1.23cm (25.4%)	1.67cm (23.9%)	2.09cm (24.0%)	2.46cm (26.0%)	2.85cm (25.0%)	3.15cm (27.3%)	3.71cm (26.0%)	4.09cm (26.1%)	4.55cm (25.5%)
	24	1.05cm (36.4%)	1.46cm (33.8%)	1.91cm (30.3%)	2.07cm (37.9%)	2.27cm (40.1%)	2.83cm (34.9%)	3.33cm (33.5%)	3.72cm (32.8%)	4.14cm (32.3%)
10 Zig	26					3.17cm (18.33%)	3.44m (22.09%)	4.10cm (17.34%)	4.24cm (23.32%)	4.85cm (20.20%)
	28					2.96cm (23.68%)	3.24cm (26.75%)	3.71cm (25.11%)	4.00cm (27.58%)	4.39cm (27.87%)
	30					2.58cm (33.45%)	3.09cm (30.16%)	3.26cm (34.34%)	3.64cm (34.17%)	4.11cm (32.55%)

NuMED

Tabla de acortamiento CP Stent.

CP Stent® de 8 Zigzag

DIÁMETRO DEL CATÉTER BALÓN BIB Y TAMAÑO DEL INTRODUCTOR	INTRODUCTOR NECESARIO CON STENT CP DESNUDO	INTRODUCTOR REQUERIDO CON STENT CP CUBIERTO
12MM (8F)	10F	12F
14MM (8F)	10F	12F
15MM (9F)	11F	12F
16MM (9F)	11F	12F
18MM (10F)	11F	14F
20MM (10F)	12F	14F
22MM (11F)	12F	14F
24MM (11F)	12F	14F

CP Stent® de 10 Zigzag

DIÁMETRO DEL CATÉTER BALÓN BIB Y TAMAÑO DEL INTRODUCTOR	INTRODUCTOR NECESARIO CON STENT CP DESNUDO	INTRODUCTOR REQUERIDO CON STENT CP CUBIERTO
26MM (16F)	16F	16F
28MM (16F)	16F	18F
30MM (16F)	16F	18F

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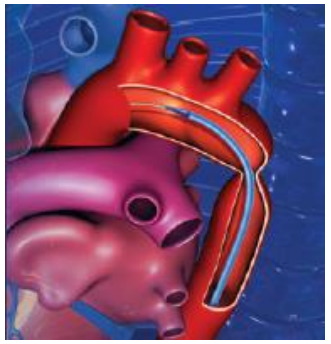
CP STENT®.

- CP STENT + BIB
- CP STENT PREMONTADO
- CP STENT CUBIERTO PREMONTADO
- NUDEL.



• Paso 1 : Se pasa la guía para luego introducir el sistema

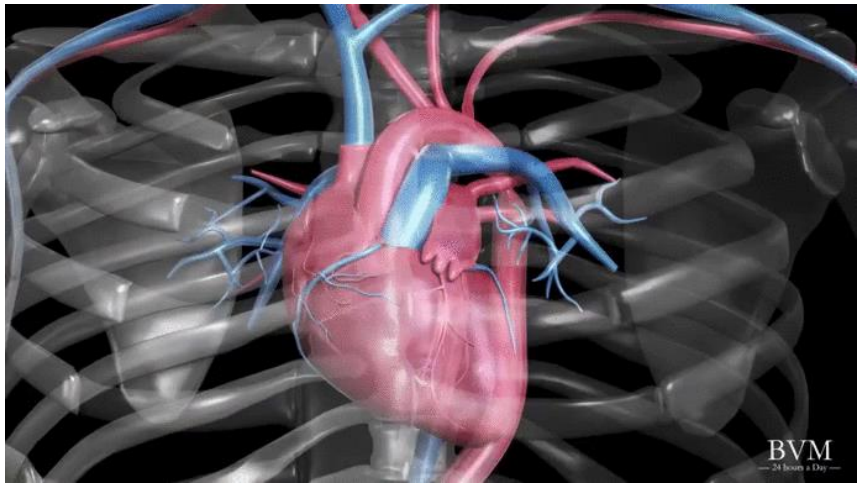
• Paso 2 : Se introduce la vaina con el CP ya pre-montado.

• Paso 3 : Se expande primero el balón interno y luego el externo.

• Paso 4: CP Stent NuDEL ya se encuentra desplegado.

Patologías tratada con CP Stent®.

- **COA + Aneurisma**
- **Estenosis Ramas Pulmonares**
- Recoartaciones Quirúrgicas
- Estenosis AO
- Síndrome obstructivo de Vena Cava
- Estenosis en Fistula AV
- Patologías de Aorta Infrarenal
- Endoleaks colocación de Endoprot AAA AAT
- Aneurisma AO Pequeña < 18mm
- CP + Traumatismo Tx
- Landing zone de implante V. Pulmonar



CP Stent; Coartación Aortica

Circulation: Vol 131, Issure 19. May 12, 2015

Congenital Heart Disease

Intermediate Outcomes in the Prospective, Multicenter Coarctation of the Aorta Stent Trial (COAST)

Jeffery Meadows, MD; Matthew Minahan, BS; Doff B. McElhinney, MD; Kerry McEnaney, BS; Richard Ringel, MD; on behalf of the COAST Investigators*

Background—The Coarctation of the Aorta Stent Trial (COAST) was designed to assess the safety and efficacy of the Cheatham Platinum stent when used in children and adults with native or recurrent coarctation. Acute outcomes have been reported. We report here follow-up to 2 years.

Methods and Results—A total of 105 patients underwent attempted implantation, with 104 successes. There were no procedural deaths, serious adverse events, or surgical intervention. All patients experienced immediate reduction in upper- to lower-extremity blood pressure difference with sustained improvement to 2 years. Rates of hypertension and medication use decreased from baseline to 12 months and remained largely unchanged at 2 years. Six aortic aneurysms have been identified: 5 were successfully treated with covered stent placement, and 1 resolved without intervention. Stent fractures were noted in 2 patients at 1 year and 11 patients at 2 years, with evidence of fracture progression. To date, only larger stent diameter was associated with stent fracture. Twelve additional fractures have occurred after 2 years. No fracture has resulted in loss of stent integrity, stent embolization, aortic wall injury, or reobstruction. Nine reinterventions occurred in the first 2 years for stent redilation and address of aneurysms, and 10 additional reinterventions occurred after 2 years.

Conclusions—The Cheatham Platinum stent is safe and associated with persistent relief of aortic obstruction. Stent fracture and progression of fracture occur but have not resulted in clinically important sequelae. Reintervention is common and related to early and late aortic wall injury and need for re-expansion of small-diameter stents.

Clinical Trial Registration—URL: http://www.clinicaltrials.gov. Unique identifier: NCT00552812.

(*Circulation*. 2015;131:1656-1664. DOI: 10.1161/CIRCULATIONAHA.114.013937.)

Key Words: aortic coarctation ■ catheterization ■ hypertension ■ stents

Study Type :	Interventional (Clinical Trial)
Actual Enrollment :	105 participants
Intervention Model:	Single Group Assignment
Masking:	None (Open Label)
Primary Purpose:	Treatment
Official Title:	Coarctation Of the Aorta Stent Trial
Study Start Date :	October 2007
Actual Primary Completion Date :	December 2012
Actual Study Completion Date :	July 2015

Children's Hospital Boston

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JACC: Cardiovascular Interventions
Volumen 9, Issue 5, 14 March 2016, Pages 484-493

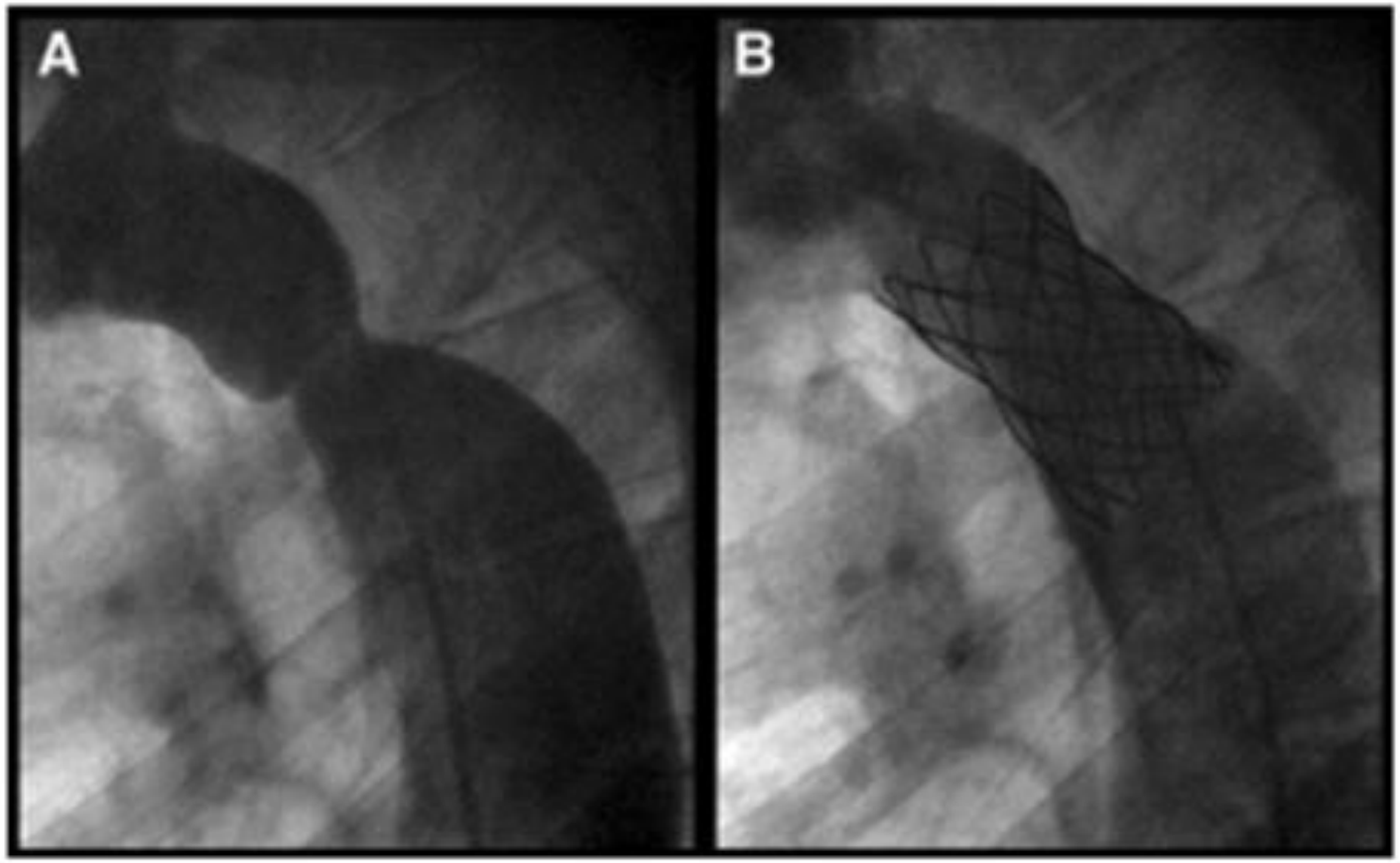
Immediate Outcomes of Covered Stent Placement for Treatment or Prevention of Aortic Wall Injury Associated With Coarctation of the Aorta (COAST II)

Nathaniel W. Taggart, MD,[a] Matthew Minahan, BS,[b] Allison K. Cabalka, MD,[a] Frank Cetta, MD,[a] Kudret Usmani, BA, BSc,[b] Richard E. Ringel, MD,[c] on behalf of the COAST II Investigators

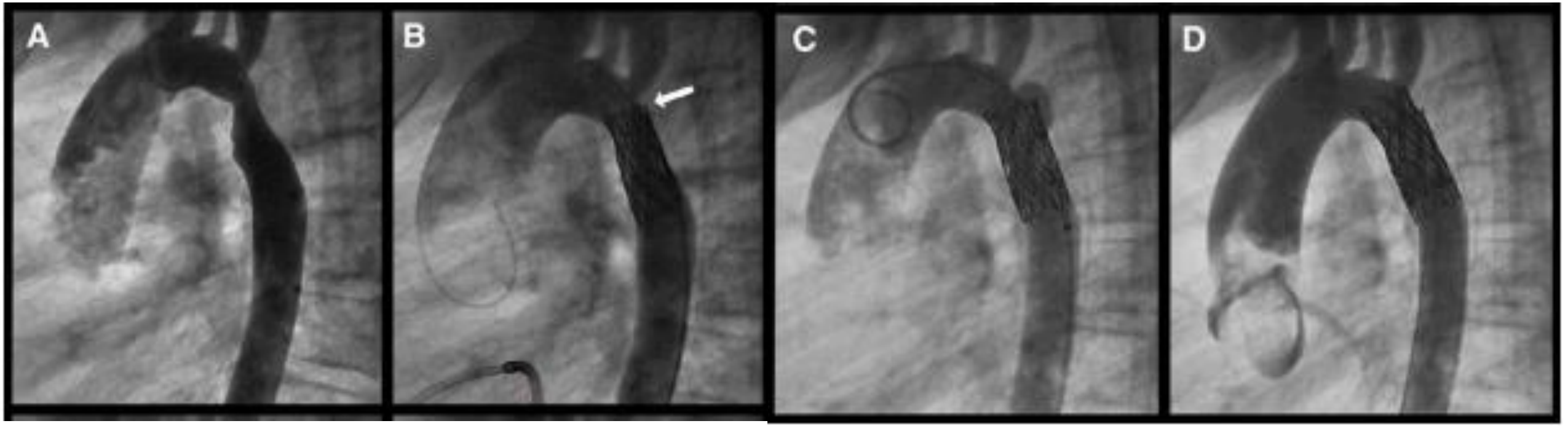
ABSTRACT

OBJECTIVES This study aimed to describe the safety and short-term efficacy of the Covered Cheatham-Platinum stent (CCPS) in treating or preventing aortic wall injury (AWI) in patients with coarctation of the aorta (CoA).

BACKGROUND The COAST II trial (Covered Cheatham-Platinum Stents for Prevention or Treatment of Aortic Wall Injury Associated with Coarctation of the Aorta Trial) is a multicenter, single-arm trial using the CCPS for the treatment and/or prevention of AWI in patients with CoA and pre-existing AWI or increased risk of AWI.



Aortic angiography before (A) and after (B) Cheatham Platinum stent implantation.



Aortic angiograms before (A) and after (B) Cheatham Platinum (CP) stent implantation for coarctation of the thoracic aorta. Although no aortic wall injury (AWI) was apparent at the time of implantation, a portion of the stent is seen protruding against the posterior wall of the aorta (arrow). Subsequent cardiac magnetic resonance imaging did not conclusively demonstrate AWI (not shown); however, at cardiac catheterization for intended stent re-expansion, an aneurysm was noted in this area (C). A covered CP stent was implanted (D), and the patient was transferred to the Coarctation of the Aorta Stent Trial II (COAST II) trial.

CP Stent; Coartación Aortica

Covered stents in patients with complex aortic coarctations

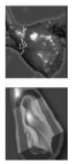
Gianfranco Butera, MD, PhD,[a] Luciane Piazza, MD,[a] Massimo Chessa, MD, PhD,[a] Diana Gabriella Negura, MD,[a] Luca Rosti, MD,[a] Raul Abella, MD,[a] Angelica Delogu, MD,[b] Claudia Condoluci, MD,[c] Andrea Magherini, MD,[d] and Mario Carminati, MD[a] *San Donato Milanese, Firenze, and Roma, Italy*

Background There are limited data in the literature about the use of covered stent in patients with aortic coarctation.

Methods Between January 2004 and September 2006, we implanted covered Cheatham-Platinum stents in 33 patients with complex aortic coarctation (23 men, median age 13 years, range 6-66 years). Twenty subjects had native aortic coarctation, whereas 13 had recoarctation. All procedures were performed under general anesthesia and orotracheal intubation.

Results The stents used ranged from 22 to 45 mm in length. The mean fluoroscopy and procedure times were 14 ± 6 and 74 ± 15 minutes, respectively. After implantation, the gradient across the stenosis decreased significantly (pre stent: median value 39 mm Hg [range 20-75 mm Hg] vs post stent: median value 0 mm Hg [range 0-12 mm Hg] [$P < .0001$]). Vessel diameter increased from a median value of 5 mm (range 0-11) to a median value of 15 mm (range 10-25) ($P < .0001$). The stents were placed in the correct position in all subjects. No complications occurred, and on angiographic control, the stenoses had been relieved and the aneurysms completely excluded. During a median follow-up of 12 months (1-40 months), the results were stable without complications. One patient developed intrastent restenosis due to a significant endothelial proliferation that was successfully treated by high-pressure balloon angioplasty.

Conclusions Covered Cheatham-Platinum stents are promising tools for the treatment of complex aortic coarctation.
(Am Heart J 2007;154:795-800.)



Covered-stent implantation in coarctation of the aorta: indications, materials, techniques and outcomes

Treatment strategies for coarctation of the aorta (CoA) include surgical repair, balloon angioplasty and stent implantation. Balloon angioplasty may be associated with complications such as recoarctation, dissection or aneurysm formation. Bare metal stent implantation prevents elastic recoil of the aorta and may provide better and more predictable results than balloon angioplasty, and over the last decade, this has often been the primary intervention for treating CoA. However, this effective option has not completely solved the problem, since complications of aortic wall injury, either acutely or during follow-up, have been encountered. Recently, covered-stent implantation has gained popularity as an alternative for patients with native or recurrent CoA. Furthermore, these stents have played an important role in treating patients with complications due to aortic wall injuries after surgical or transcatheter repair. Indications for covered-stent implantation, a description of materials available, preferred implantation techniques and acute and long-term outcomes are described in this review.

KEYWORDS: coarctation of aorta congenital heart disease covered-stent implantation interventional cardiology

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Covered Cheatham-Platinum Stents for Aortic Coarctation

Early and Intermediate-Term Results

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London, United Kingdom; Berlin, Germany; and Warsaw, Poland

OBJECTIVES This study sought to evaluate the use of covered Cheatham-platinum (CP) stents in the treatment of aortic coarctation (CoA).

BACKGROUND Aortic aneurysms and stent fractures have been encountered after surgical and transcatheter treatment for CoA. Covered stents have previously been used in the treatment of abdominal and thoracic aneurysms in adults. We implanted covered CP stents as a rescue treatment in patients with CoA aneurysms or previous stent-related complications and in patients at risk of developing complications because of complex CoA anatomy or advanced age.

METHODS Thirty-three covered CP stents were implanted in 30 patients; 16 patients had had previous procedures. The remaining patients had complex or near-atretic CoA.

RESULTS The mean patient age and weight were 28 (±17.5) years (range 8 to 65 years), and 62 (±13) kg (range 28 to 86 kg), respectively. The systolic gradient across the CoA decreased from a mean (±SD) of 36 ± 20 mm Hg before to a mean of 4 ± 4 mm Hg after the procedure ($p < 0.0001$), and the diameter of the CoA increased from 6.4 ± 3.8 mm to 17.1 ± 3.1 mm ($p < 0.0001$). The follow-up period was up to 40 months (mean, 11 months). All stents were patent and in good position on computed tomography or magnetic resonance imaging performed three to six months later. In 43% of the patients antihypertensive medication was either decreased or stopped.

CONCLUSIONS Covered CP stents may be used as the therapy of choice in patients with complications after CoA repairs, whereas they provide a safe alternative to conventional stenting in patients with severe and complex CoA lesions or advanced age. (J Am Coll Cardiol 2006;47:1457–63)

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CP Stent; Tratamiento de la lesión del conducto ventricular derecho durante el reemplazo de la válvula pulmonar transcatéte.

Circulation: Cardiovascular Interventions
Vol 11, Issue 10. October 2018

ORIGINAL ARTICLE

Covered CP Stent for Treatment of Right Ventricular Conduit Injury During Melody Transcatheter Pulmonary Valve Replacement

Results From the PARCS Study

See Editorial by Hainstock

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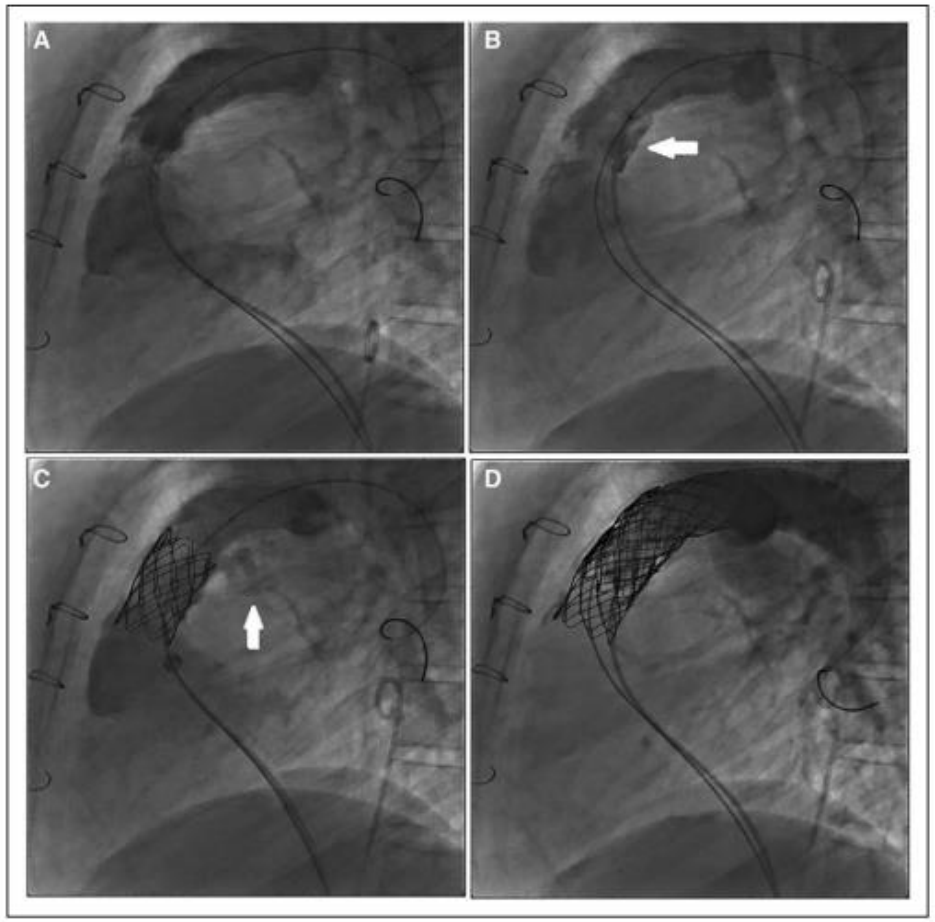
Bryan H. Goldstein, MD
Ram N. Bishnoi, MD
Karl S.M. Bisselou, MS
Kerry McEnaney, BS
Matthew Minahan, BS
Richard E. Ringel, MD
for the PARCS Investigators

BACKGROUND: High-pressure balloon and stent angioplasty are frequently necessary to prepare the dysfunctional right ventricular outflow tract conduit before transcatheter pulmonary valve replacement (TPVR). Conduit injury can result, which may be catastrophic to the patient or prevent successful TPVR.

METHODS AND RESULTS: The PARCS trial (Pulmonary Artery Repair

Recruitment Status : Completed
First Posted : April 4, 2013
Results First Posted : March 14, 2016
Last Update Posted : May 8, 2018



A, Lateral angiography before injury. **B**, Category 1 wall injury with linear contrast stasis within a flap (arrow) of the posterior wall of the conduit. **C**, Extension of the injury after placement of the CCPS showing uncontained contrast (arrow) extravasating posterior to conduit wall, which defines a category 3 tear. **D**, Final angiogram with 3 CCPS and Melody valve in place with no residual injury, category 0.

INTERVENTIONAL CARDIOLOGY AND SURGERY

The CP stent—short, long, covered—for the treatment of aortic coarctation, stenosis of pulmonary arteries and caval veins, and Fontan anastomosis in children and adults: an evaluation of 60 stents in 53 patients

P Ewert, S Schubert, B Peters, H Abdul-Khaliq, N Nagdyman, P E Lange

Heart 2005;**91**:948–953. doi: 10.1136/hrt.2004.040071

See end of article for authors' affiliations

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Accepted 27 August 2004

Objective: To evaluate the feasibility and usefulness of the Cheatham platinum (CP) stent in a broad spectrum of lesions.
Methods: Retrospective analysis of 60 implanted CP stents (11–80 mm lengths, 12 covered) between September 2001 and March 2004.
Patients: 53 patients aged 2.5–68 years (median 17 years). Body weight ranged from 12–95 kg (median 52 kg). Thirty six patients had aortic (re)coarctation; seven of them had functionally interrupted aortic arches. Thirteen patients had pulmonary artery stenosis and four had stenosis of caval veins or conduits in a total cavopulmonary connection (TCPC).
Results: Arterial pressure gradients dropped from 33 mm Hg (range 20–80 mm Hg) to 5 mm Hg (range 0–10 mm Hg) and pressure gradients in TCPC or caval veins dropped from 4 mm Hg (range 4–20 mm Hg) to 0 mm Hg (range 0–3 mm Hg). All stents were placed in the target lesion without complications. Three stent fractures without clinical instability were noted.
Conclusions: The CP stent is suitable for the treatment of vessel stenosis in congenital heart diseases from childhood to adulthood. Whether these good results will be stable in the long term needs to be investigated.

Heart 2005 Jul;91(7):948-53.

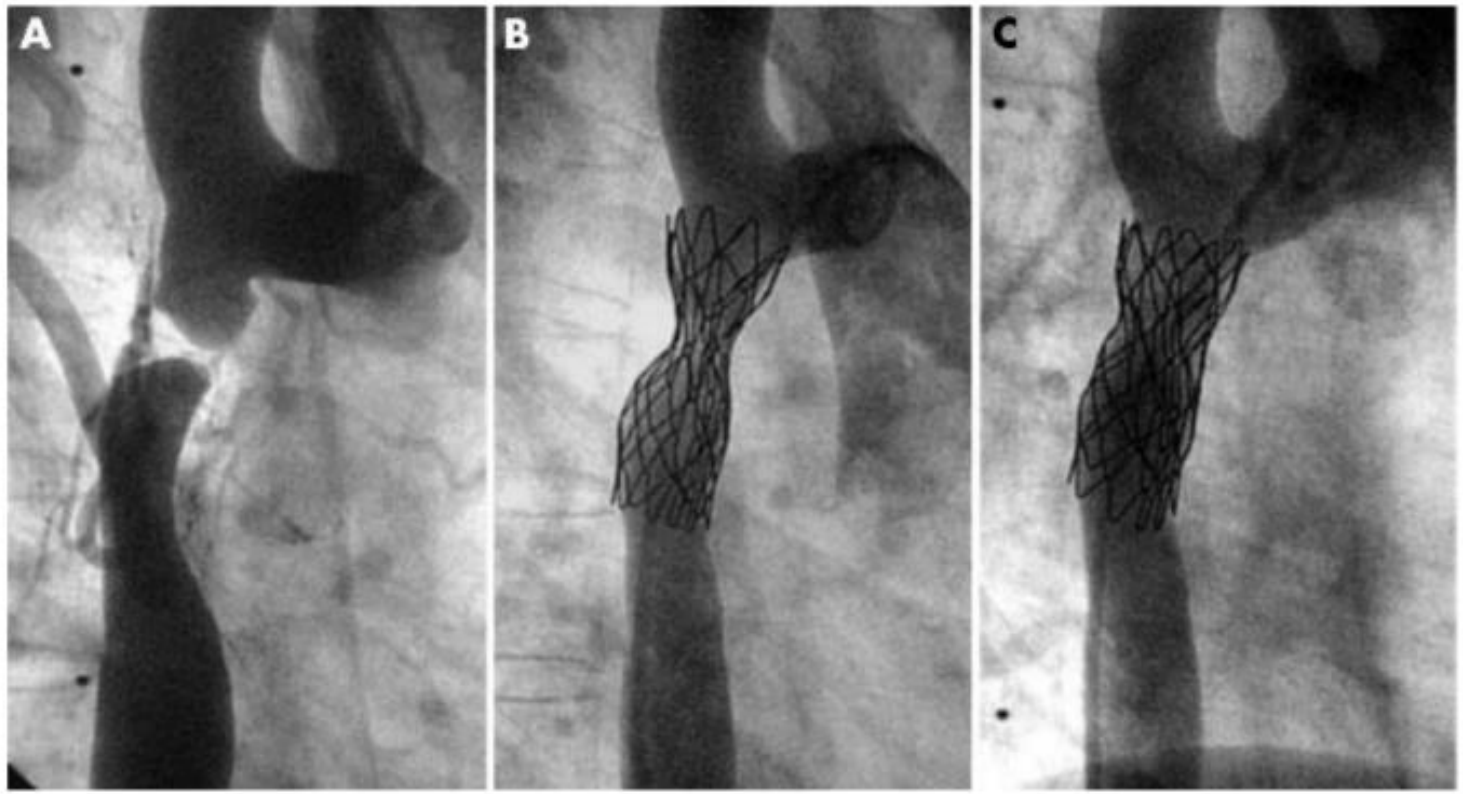


Figure 1 Implantation of a 39 mm covered Cheatham platinum (CP) stent for the treatment of subatretic aortic coarctation. (A) Composite of two frames of the same angiogram (early and late phase). The procedure was performed in two steps: (B) firstly, the stent was implanted with only moderate dilatation of the subatretic area; (C) then after six months the stent was definitively dilated to completely relieve the stenosis.

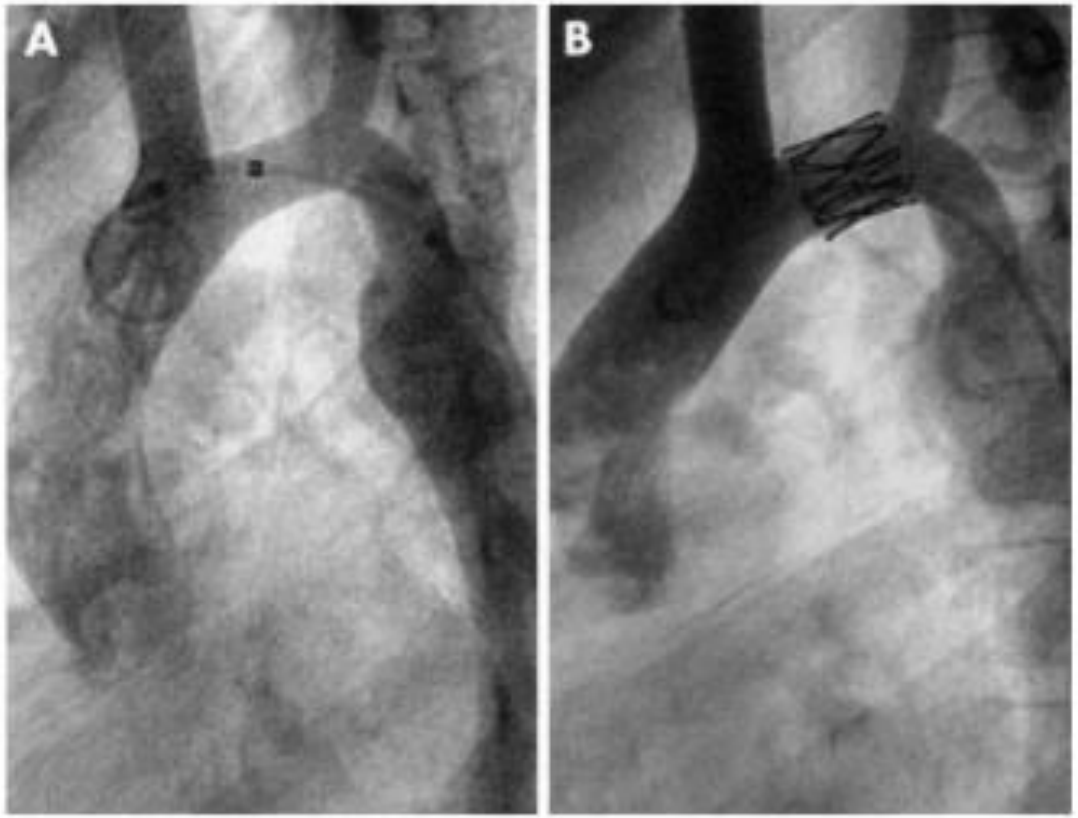


Figure 2 The shortest stent in this series was an 11 mm stent in the transverse aortic arch of an 8 year old boy. (A) Before implantation; (B) after implantation.

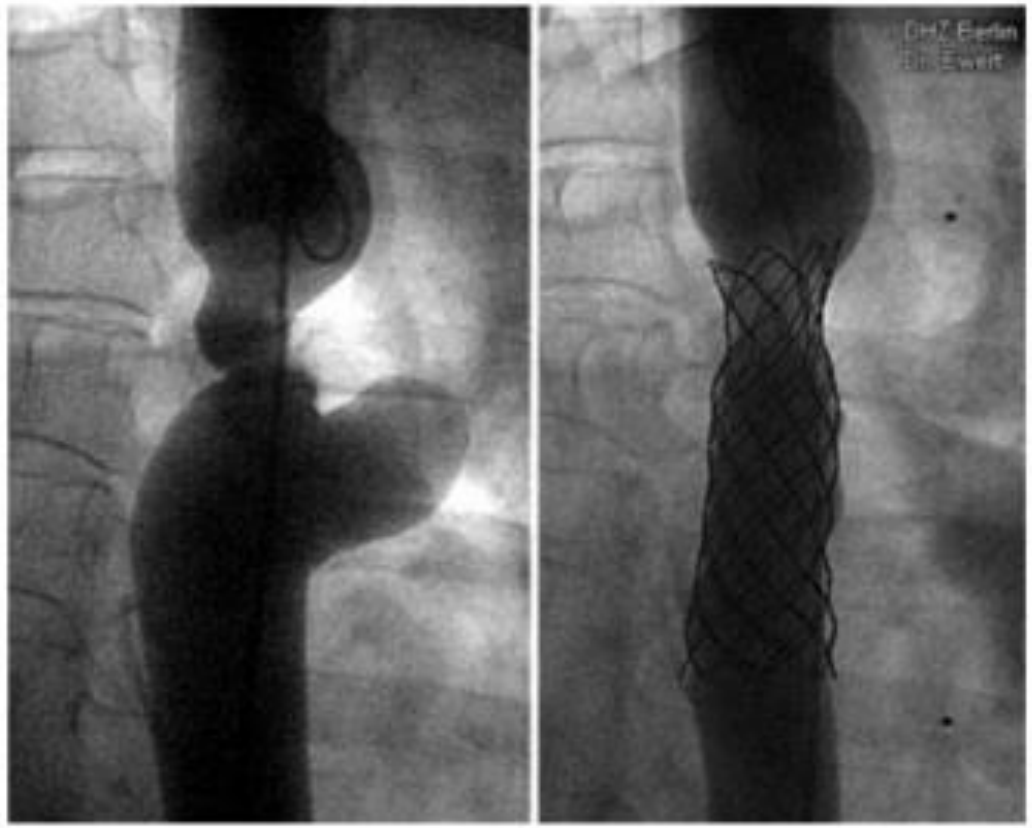


Figure 3 The largest stent used in this series was an 80 mm covered stent in a patient with recoarctation and aneurysm 30 years after surgery. (A) Before implantation; (B) after implantation.

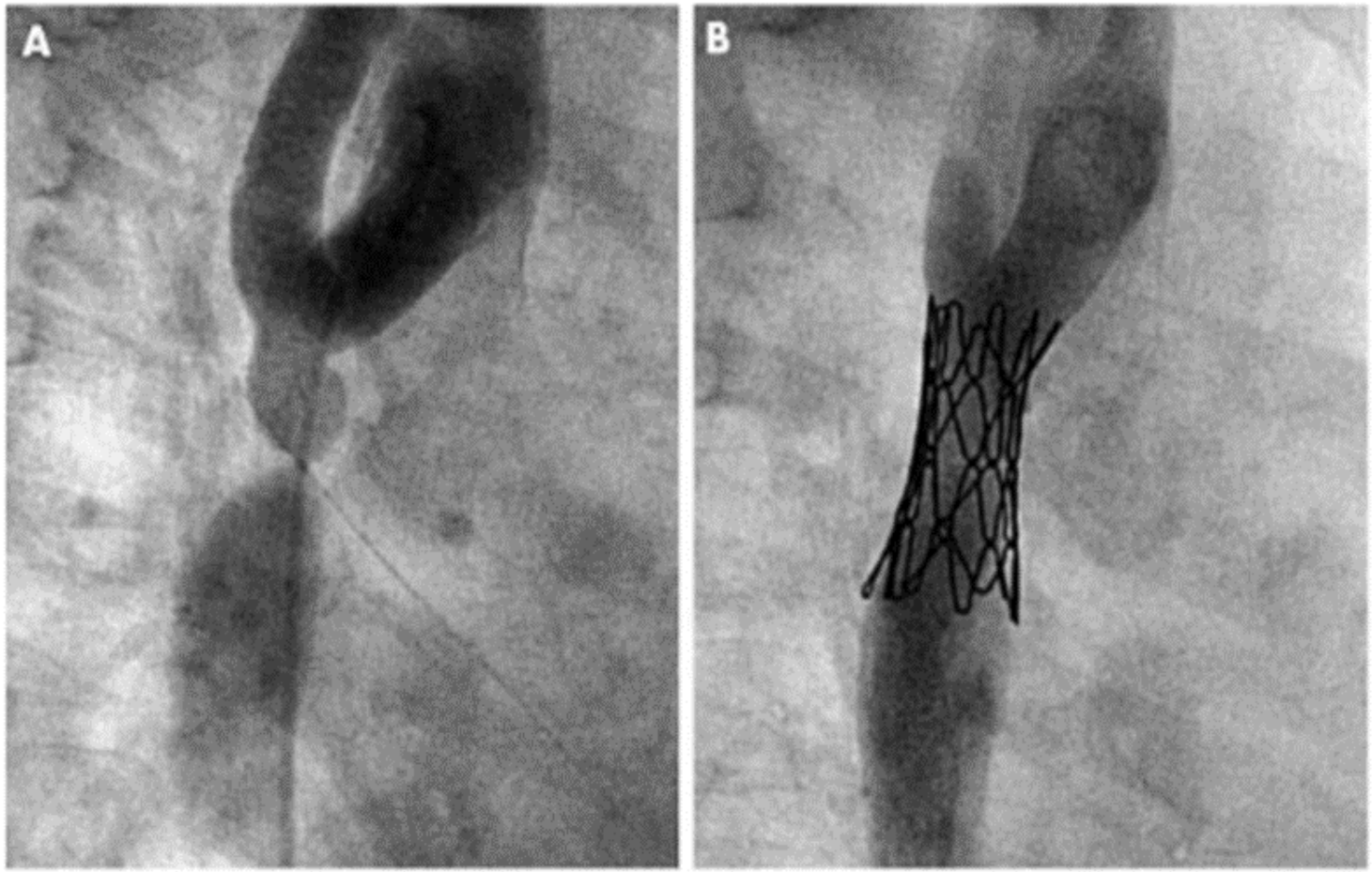


Figure 4 (A) Subatretic aortic coarctation in a 3 year old child weighing 14 kg. (B) Balloon dilatation did not achieve sufficient pressure reduction, so that a 22 mm CP stent on a 10 mm balloon was implanted, which led to a reduction of the pressure gradient from 60 mm Hg to 5 mm Hg.

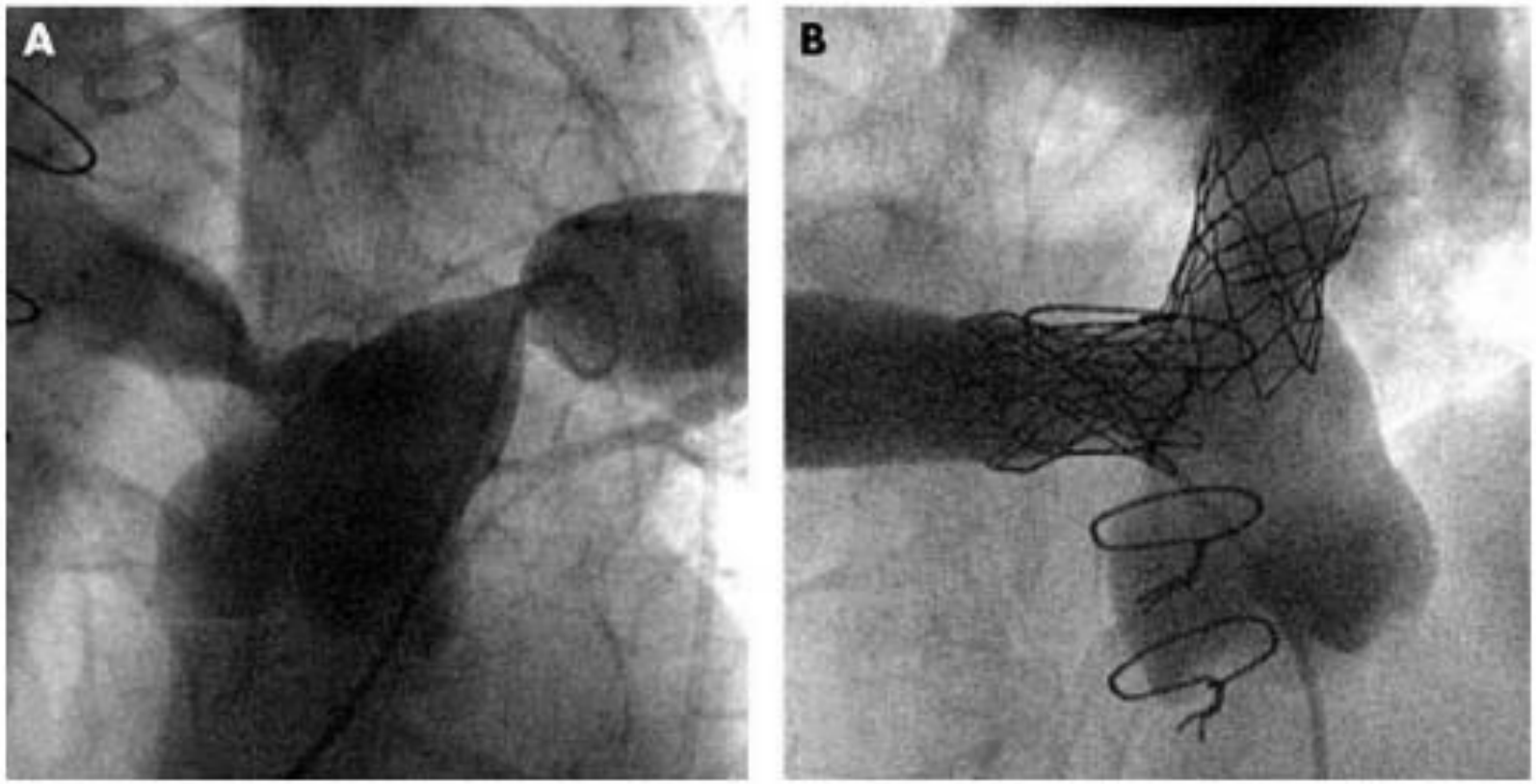


Figure 5 (A) Severe stenoses of right and left pulmonary arteries in an adult patient (35° left anterior oblique, 36° cranial). (B) Complete relief of the pressure gradients after consecutive implantation of two CP stents (8 zig, 28 mm each) and dilatation with a 16 mm balloon (20° right anterior oblique, 45° cranial). The smooth edges of the contralateral stent minimise the risk of balloon rupture.

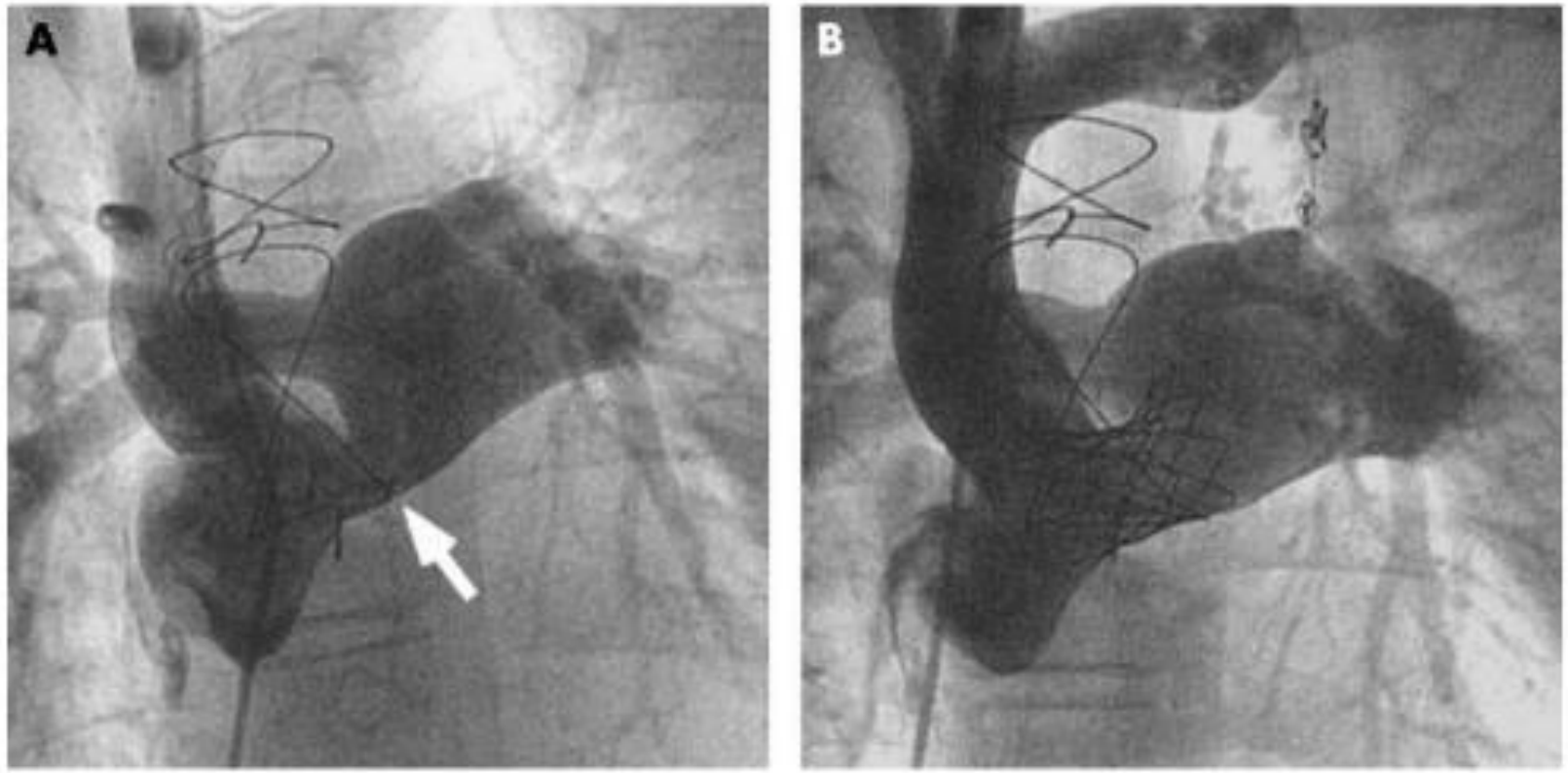
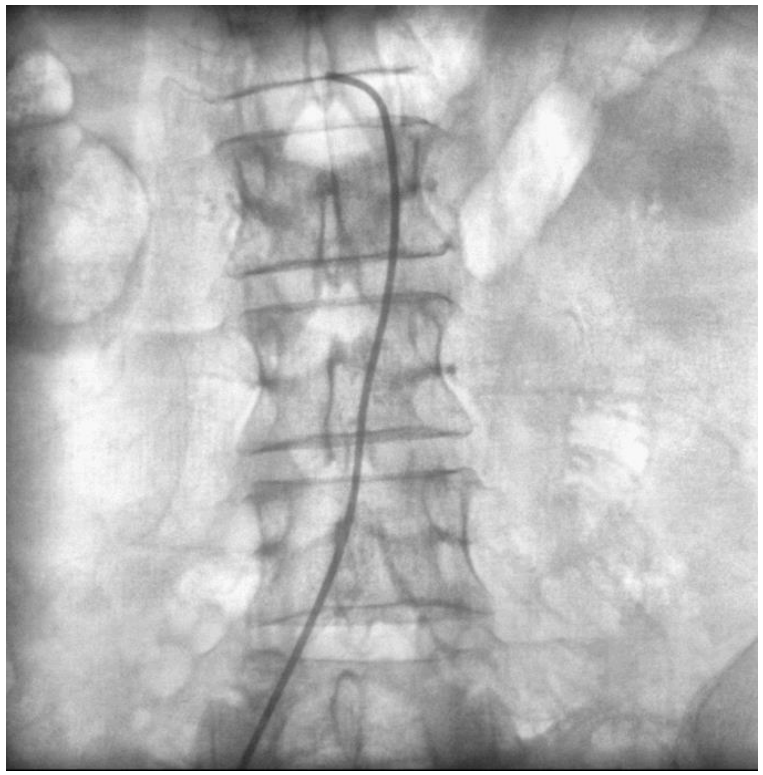
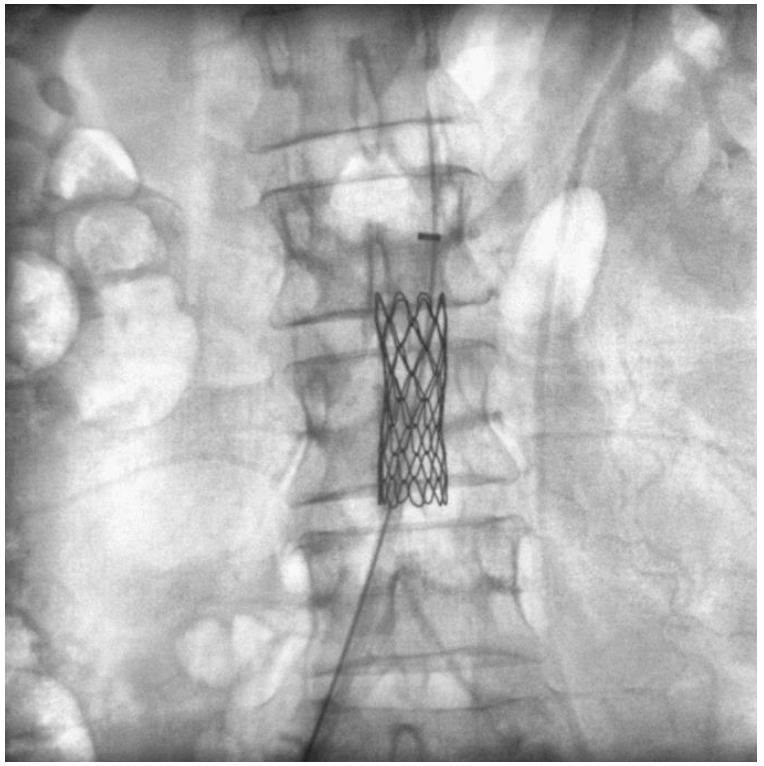


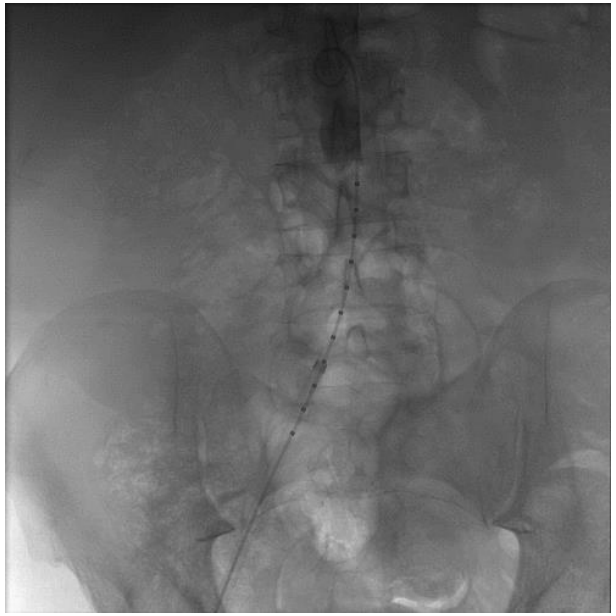
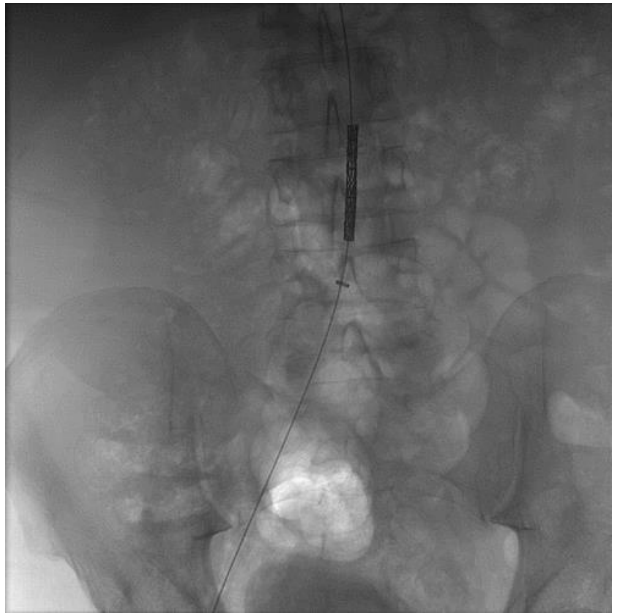
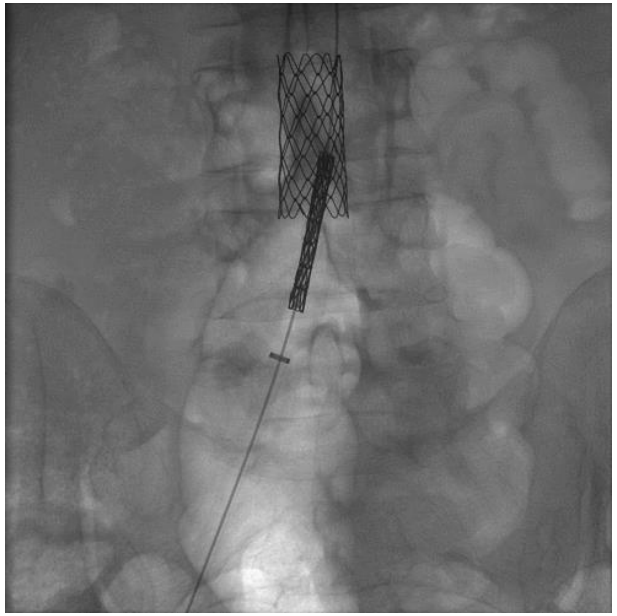
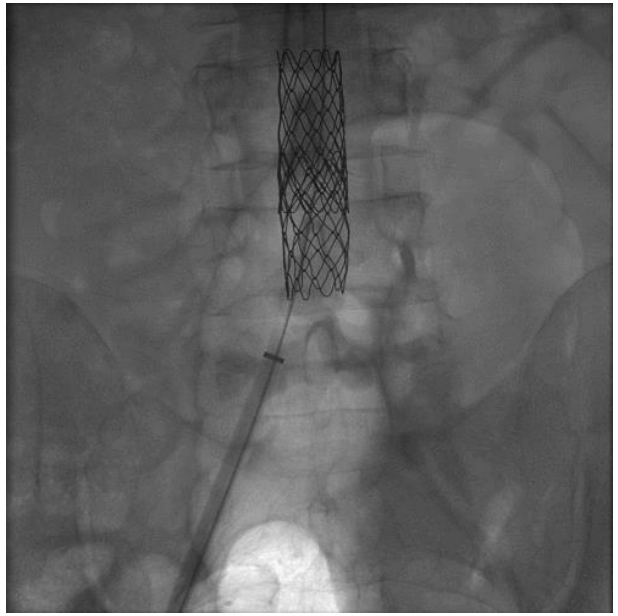
Figure 6 Patient with total cavopulmonary anastomosis by an intra-atrial tunnel and connection of the right atrial appendage to the pulmonary trunk. (A) A stenosis (arrow) at the atrial-arterial junction was treated with implantation of a 28 mm. (B) CP stent dilated to a diameter of 22 mm.

CP Stent; Estenosis en Aorta Abdominal





CP Stent x2; Estenosis en Aorta Abdominal

CP Stent: Lesión Traumática.

The American Journad of Cardiology.
Vol. 110, Issue 10. Nobember 2012

Percutaneous Balloon-Expandable Covered Stent Implantation for Treatment of Traumatic Aortic Injury in Children and Adolescents

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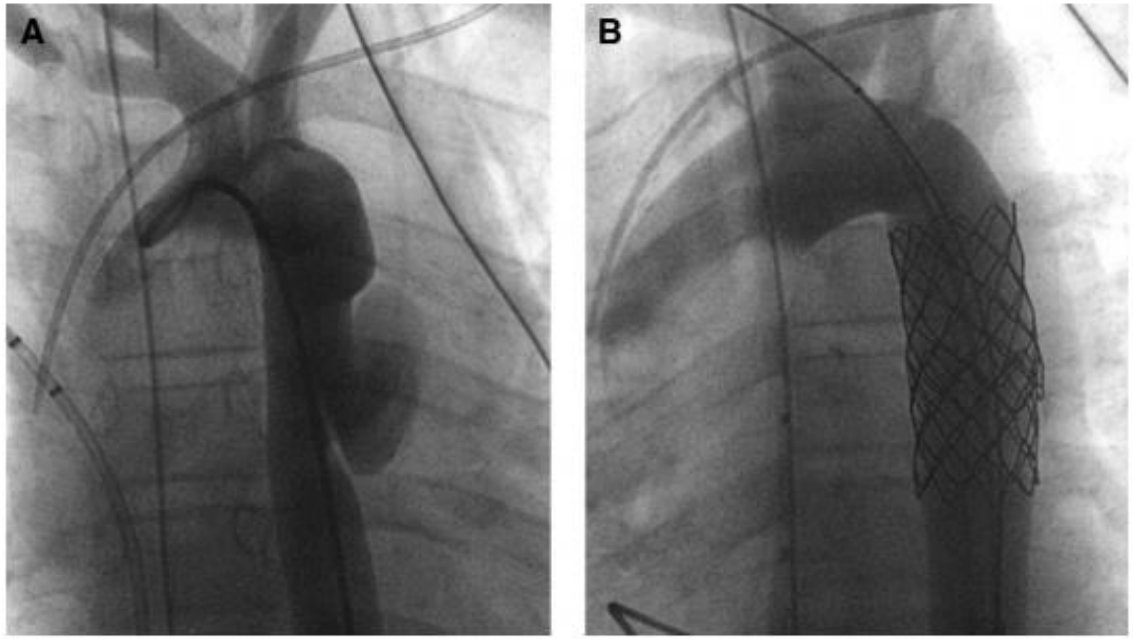
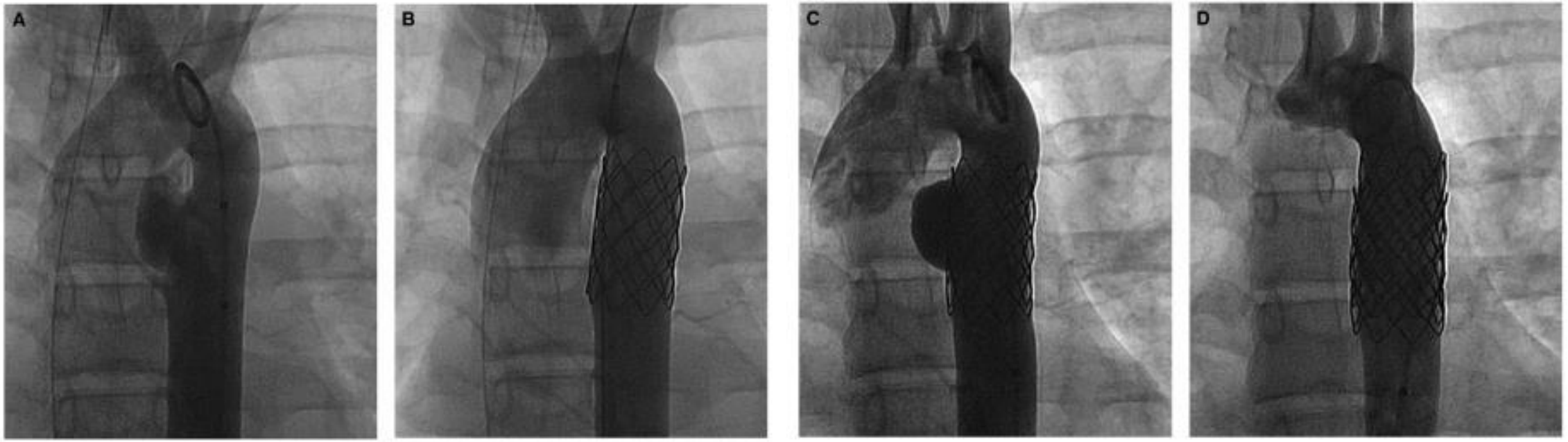
Surgical treatment of pediatric acute traumatic aortic injury (TAI) after blunt chest trauma is standard of care. Use of endovascular stent grafts for treatment of TAI in adults is common but has important limitations in children. We sought to describe the use of balloon-expandable covered endovascular stents for treatment of TAI in children and adolescents. Participants of the multicenter Coarctation of the Aorta Stent Trial (COAST) had access to investigational large-diameter, balloon-expandable, covered stents (covered Cheatham-platinum stents; NuMed, Inc., Hopkinton, New York) on an emergency-use basis. From 2008 through 2011, 6 covered stents were implanted in 4 patients at 3 COAST centers for treatment of TAI. Median patient age was 13.5 years (range 11 to 14) and weight was 58 kg (40 to 130). All patients sustained severe extracardiac injuries that were judged to preclude safe open surgical repair of TAI. Median aortic isthmus and stent implantation balloon diameters were 16.4 mm (13.2 to 19) and 19 mm (16 to 20), respectively. Stent implantation was technically successful in all attempts. Complete exclusion of aortic wall injury was achieved in all cases. There were no access site complications. At a median follow-up of 24 months, there was 1 early death (related to underlying head trauma) and 1 patient with recurrent aortic aneurysm who required additional stent implantation. In conclusion, balloon-expandable covered-stent implantation for treatment of pediatric TAI after blunt trauma is generally safe and effective. Availability of this equipment may alter the standard approach to treatment of pediatric TAI. (Am J Cardiol 2012;110:1541–1545)



(A) Posteroanterior aortogram demonstrating the presence of a **traumatic aortic dissection with aneurysm** formation in the proximal descending thoracic aorta. Mild stenosis of the “true” aortic lumen can be appreciated. (B) After deployment of 2 covered Cheatham-platinum stents in “telescoping” fashion, repeat aortogram demonstrates a smooth-walled unobstructed descending aorta with complete exclusion of the aneurysm and no extravasation of contrast.



Posteroanterior aortogram demonstrating the presence of a **traumatic aneurysm** in the proximal descending thoracic aorta at the level of the ligamentum arteriosum. (B) After deployment of a covered Cheatham-platinum stent, repeat aortogram demonstrates a smooth-walled descending aorta with complete exclusion of the aneurysm and no new aortic wall injury. (C) After cross-sectional imaging at **24-month** follow-up demonstrated the presence of recurrent aneurysm, repeat aortogram was obtained. This posteroanterior aortogram demonstrates the presence of an aneurysm with similar morphologic appearance as the original traumatic aneurysm, suggesting recurrent aortic communication. (D) After deployment of a second covered Cheatham-platinum stent, repeat aortogram demonstrates a smooth-walled descending aorta with complete exclusion of the recurrent aneurysm.

CP Stent: Síndrome obstructivo de Vena Cava.

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Tratamiento percutáneo del síndrome de vena cava superior tras implantación de electrodos y/o cirugía de cardiopatías congénitas

Percutaneous Treatment of Superior Vena Cava Syndrome After Pacemakers Electrodes Implantation and/or Surgical Correction of Congenital Heart Disease

Sra. Editora:

El síndrome de la vena cava superior (VCS) es una afección que comprende los síntomas derivados de la disminución u obstrucción del flujo sanguíneo a través de la VCS.

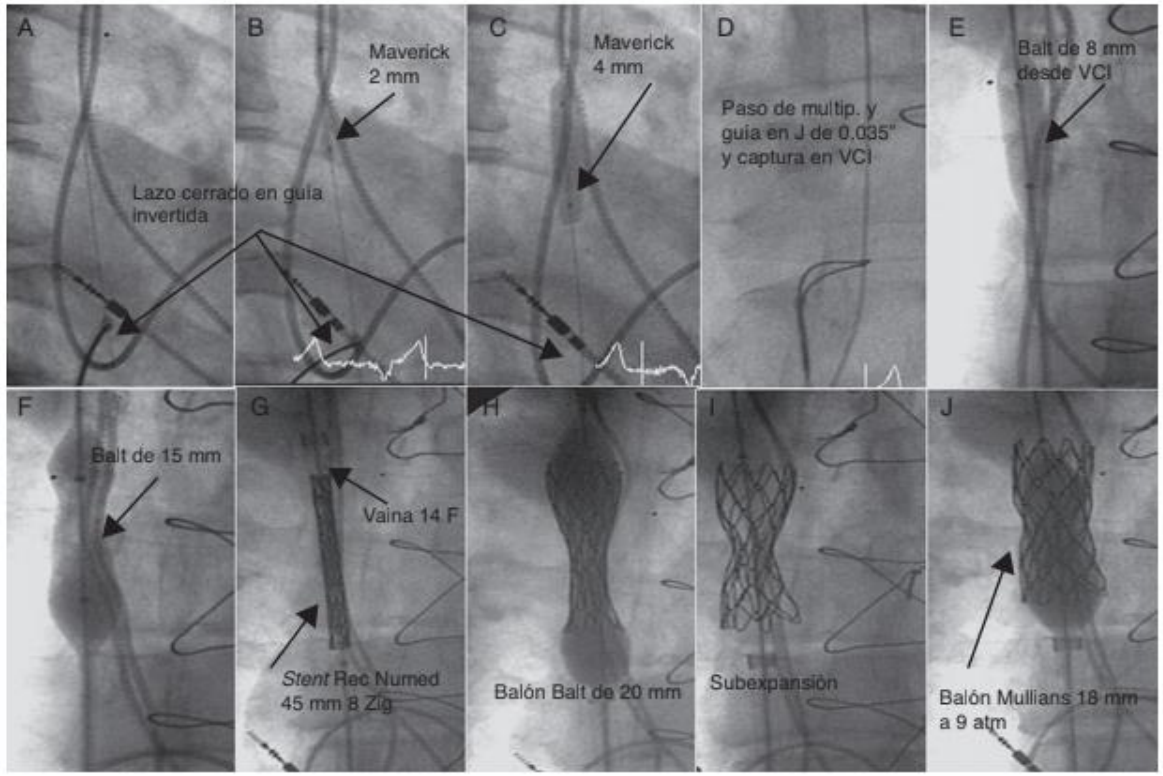
En función de la gravedad de los síntomas y la etiología, el tratamiento puede comprender cirugía, en ocasiones con construcción de un puente venovenoso. Como alternativa a la cirugía convencional, se ha desarrollado la angioplastia simple o con *stent*.

Desde enero de 1993 hasta diciembre de 2011, en nuestro centro 5 pacientes presentaron este síndrome y todos ellos fueron tratados percutáneamente sin complicaciones: 1 con angioplastia simple[1], 1 con *stent* convencional y 3 con *stent* recubierto de politetrafluoroetileno. En la tabla se resumen sus principales características y el tratamiento realizado.

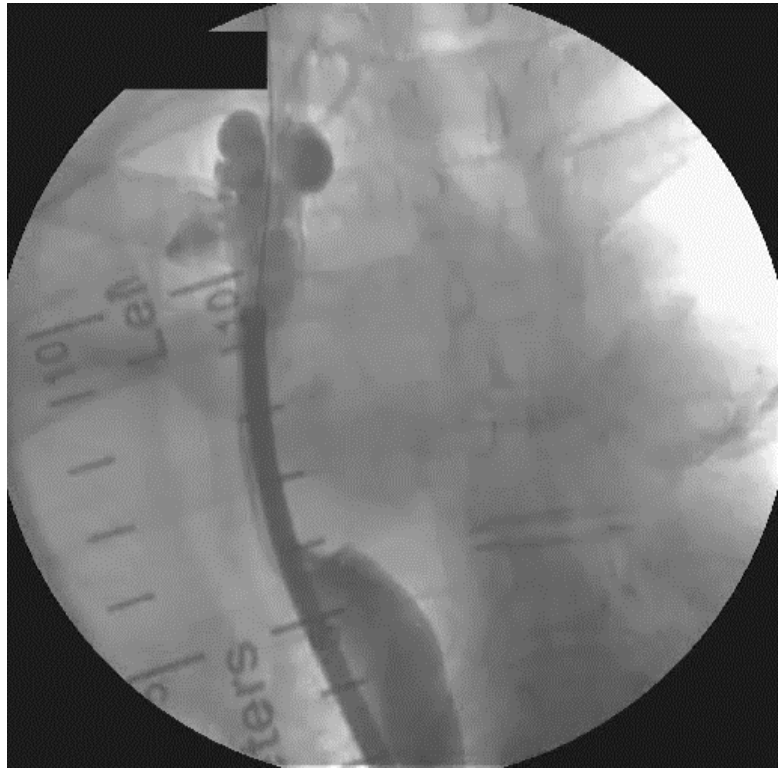
En cuanto a la técnica empleada, en los casos con paso anterógrado se procedió vía yugular con catéteres multipropósito de 5 o 6 Fr (Cordis), por el cual se introdujo una guía recta de 0,035" de 260 cm (Boston), que a su vez se capturó en aurícula derecha (AD) mediante catéter lazo Goose Neck® (ev3) de 15 mm, y se estableció un circuito venovenoso para luego proseguir por vía femoral.

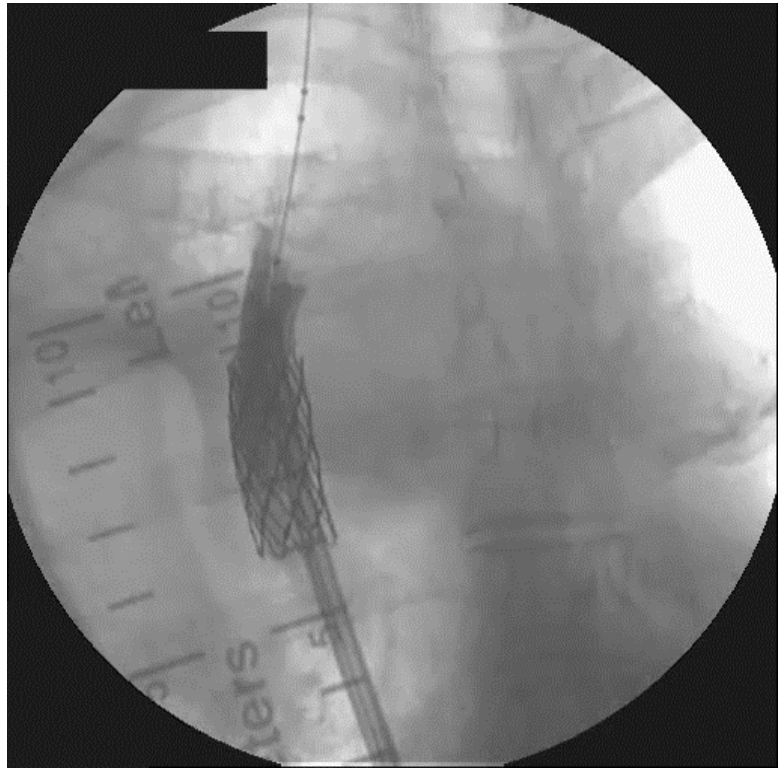
En los 2 casos con obstrucción completa, por vía femoral posicionamos un catéter lazo Goose Neck® de 15 mm en la base de AD y, a través del catéter multipropósito, avanzamos una guía coronaria PT Graphix® de 0,014" (Boston) invertida. La guía se progresa, con control angiográfico en dos proyecciones, paralela al electrodo del marcapasos. Una vez atravesada la obstrucción, fijamos el extremo rígido de la guía con el lazo y lo descendemos a AD (fig. A). Seguidamente se dilata con balones coronarios Maverick® (Boston) de 2, 3 y 4 mm (fig. B y C) para después avanzar el multipropósito por el túnel creado y sustituir la guía coronaria por una guía de 0,035" que se extrae por vena femoral estableciendo el «raíl yugulofemoral» (fig. D).

En el caso de la angioplastia simple, utilizamos balones de 7 y 15 mm Balt™ introducidos vía femoral. En los procedimientos con *stent*, accedimos también por vía femoral y en todos ellos predilatamos con balones de 8 a 15 mm (fig. E y F) para introducir la vaina de Mullins (Cook) de 9 a 14 Fr hasta la VCS (fig. G). Se utilizaron tres *stents* recubiertos de politetrafluoroetileno de 45 mm y 8 Zig® (Numed) y un *stent* Palmaz® XD 29 (Cordis), que se montaron en diferentes balones propios con relación balón/VCS = 1 (fig. H; tabla). En dos casos, el *stent* infraexpandido se redilató a alta presión (9 atm) con balón de Mullins (fig. I y J).

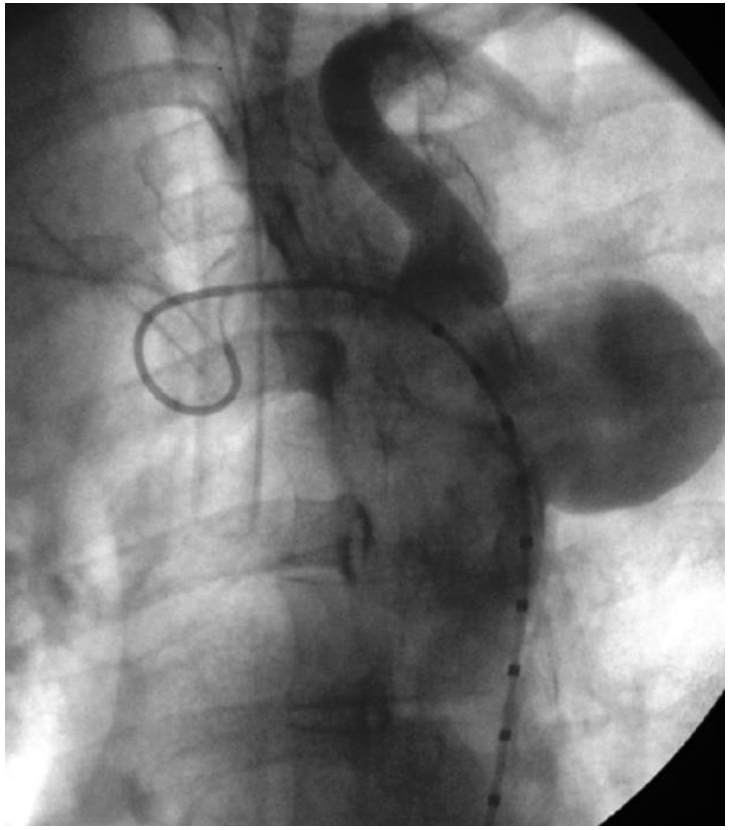


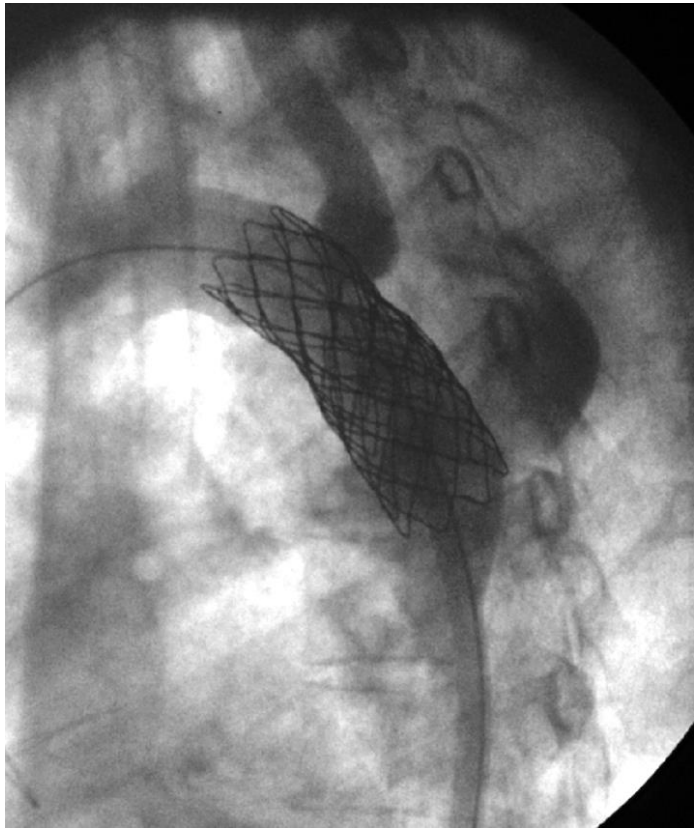
CP Stent: Síndrome obstructivo de vena cava.



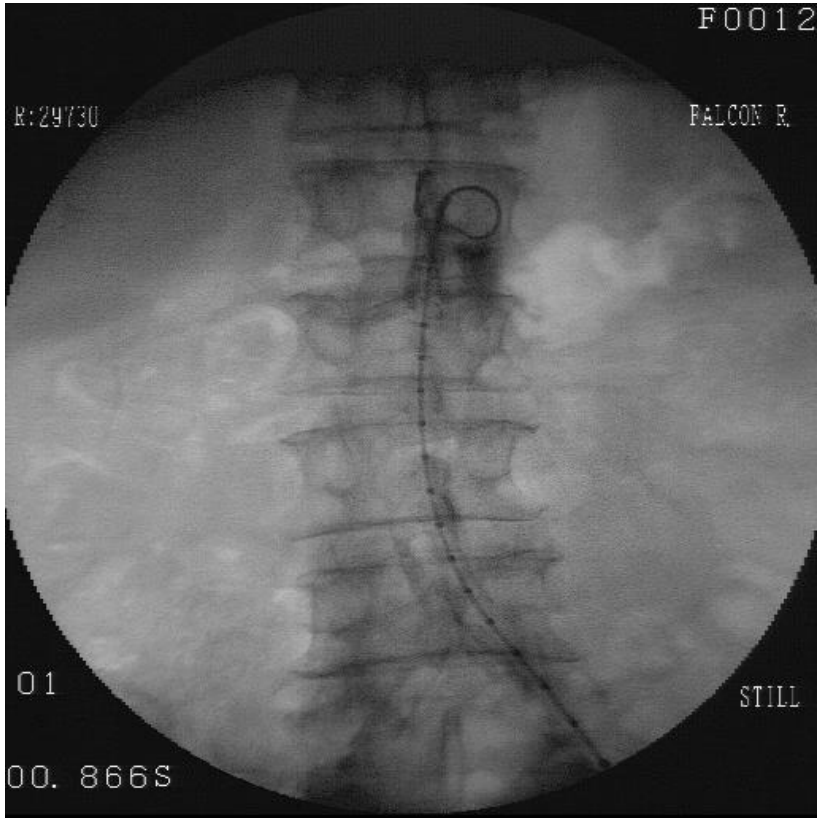


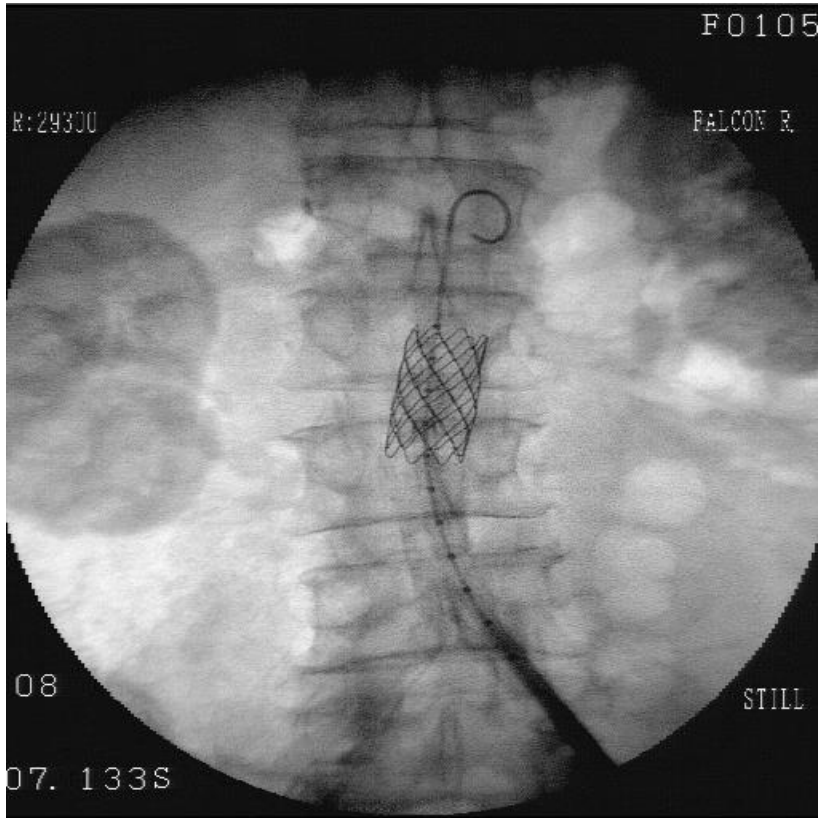
CP Stent: Aneurisma Aórtico



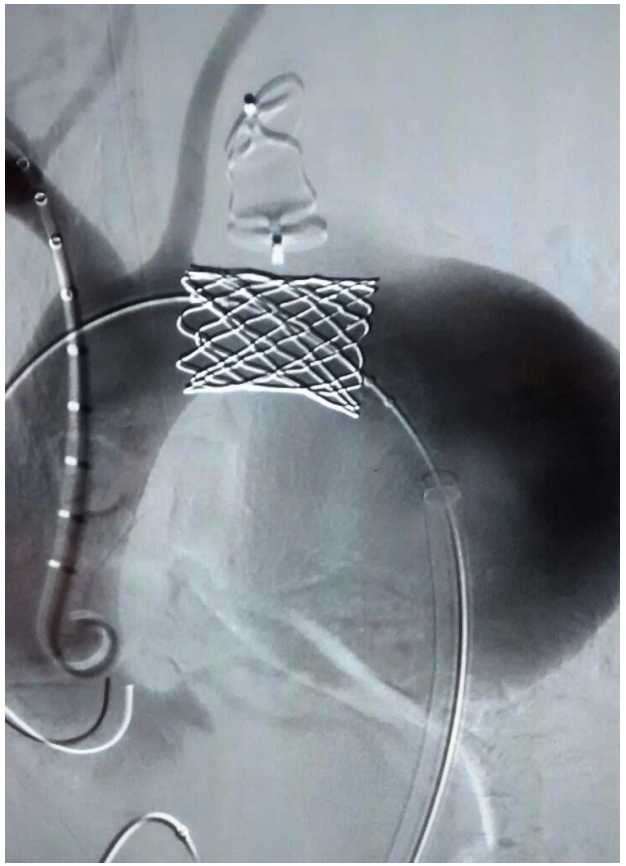


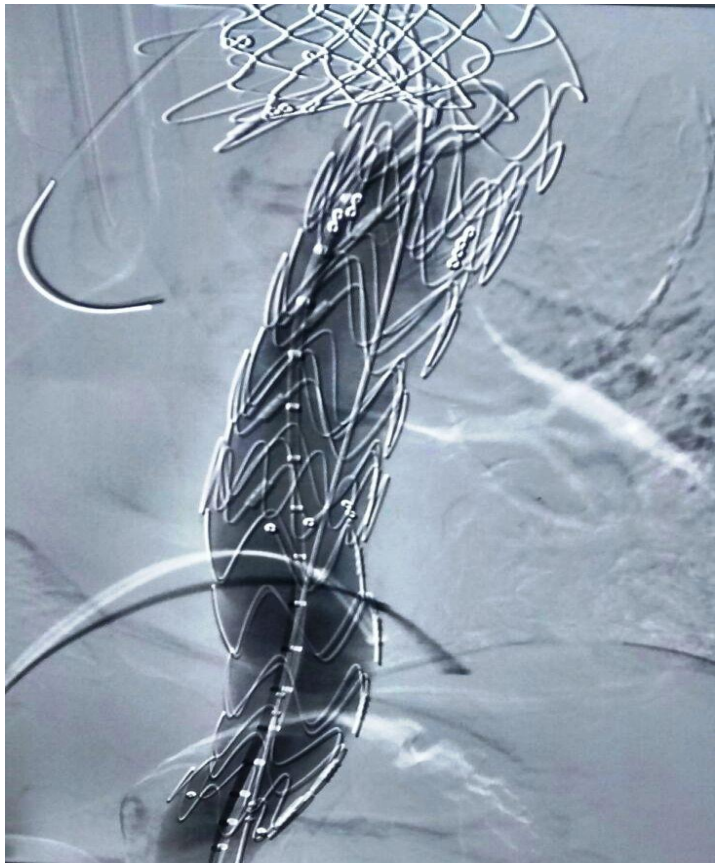
CP Stent: Aneurisma Aortico





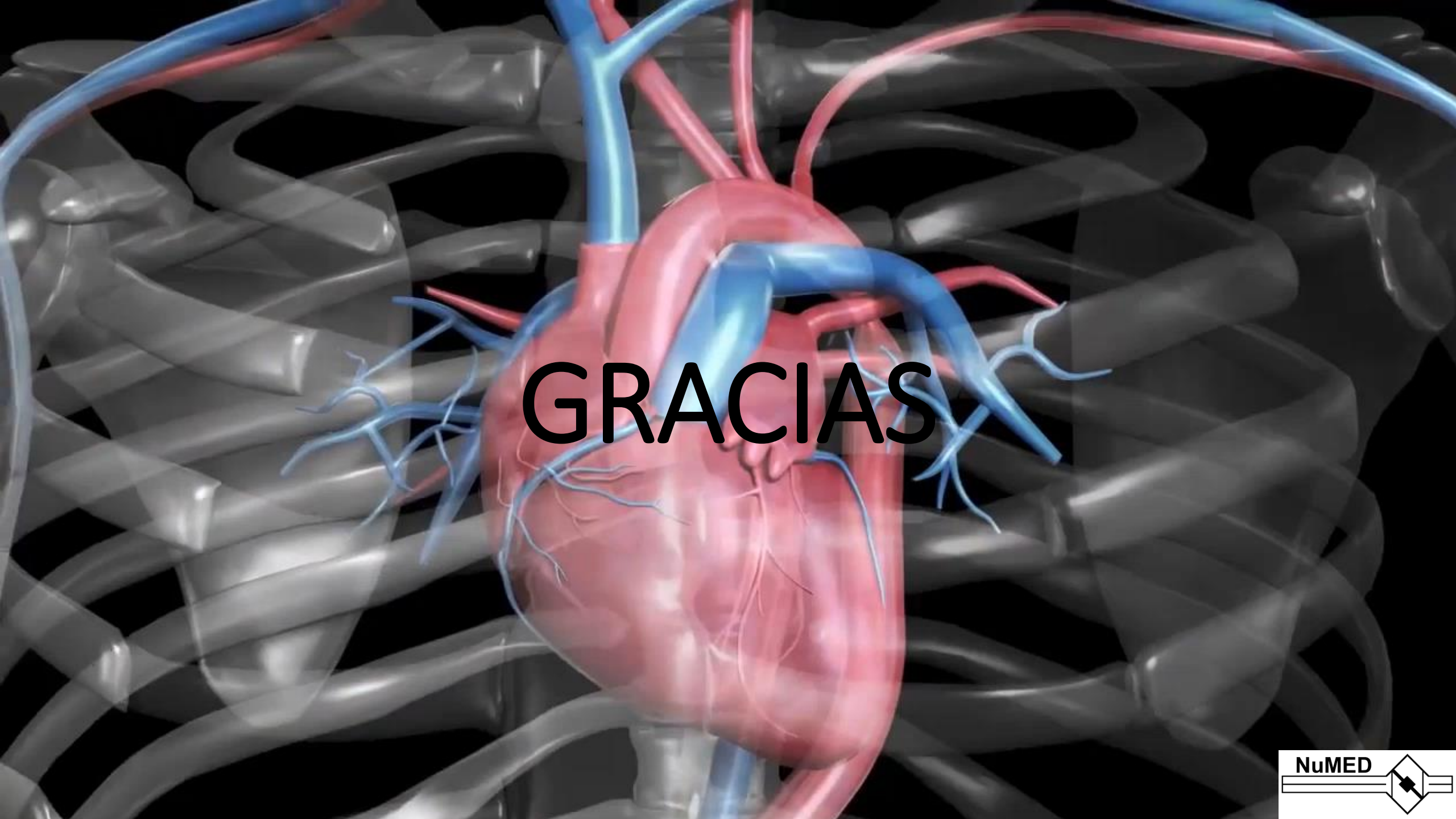
CP Stent; Fijación de endoprótesis





Conclusión:

El CP Stent es una alternativa terapéutica que, durante mucho tiempo, ha demostrado ser eficaz y segura en el tratamiento endovascular de diferentes patologías cardiovasculares, afirmado por la experiencia y evidencia médica.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