europass



# ENRICO RAMONI

**Data di nascita:** 07/08/1975 | **Nazionalità:** Italiana | **Sesso:** Maschile | **Numero di telefono:** (+39) 3493428185 (Cellulare) | **Indirizzo e-mail:** enricoramoni@gmail.com | **Sito web:** http://www.gvmnet.it/it/medici | **Sito web:** https://www.miodottore.it/enrico-ramoni/cardiochirurgo-chirurgo-vascolare/bologna | **Sito web:** https://share.google/sK8uWCdbi8SgXEmnB | **Sito web:** https://www.facebook.com/Dott.EnricoRamoni?locale=ms_MY | **Facebook:** https://www.facebook.com/Dott.EnricoRamoni | **X:** https://twitter.com/DottERamoni | **LinkedIn:** https://www.linkedin.com/in/enrico-ramoni-637b987b/ | **YouTube:** https://www.youtube.com/channel/UCfvhiXXMoZRQNgepXg6el8Q?view_as=subscriber |

**Whatsapp Messenger:** Enrico Ramoni | **Facebook Messenger:** Enrico Ramoni |

**Indirizzo:** Via Victor Jara n.13, 40017, San Giovanni in Persiceto (BO), Italia (Abitazione)

## PRESENTAZIONE

Il Dott. Enrico Ramoni è nato a Perugia, dove ha conseguito il diploma di maturità classica presso il Liceo A. Mariotti. Successivamente si è laureato in Medicina è Chirurgia presso l'Università di Perugia, con il voto di 110 su 110 cum laude. Si è poi trasferito a Pavia per specializzarsi in Cardiochirurgia presso il Policlinico San Matteo, col Prof. Mario Viganò. Nel 2004 si è sposato con Patrizia, tecnico perfusionista, ed ha due figlie: Beatrice, nata nel 2006, e Greta, nata nel 2011. Dal 2016 vive a Bologna, dove esercita la maggior parte della sua attività come cardiochirurgo presso il centro Villa Torri Hospital GVM Care & Research.

## ESPERIENZA LAVORATIVA

### MEDICO SPECIALIZZANDO IN CARDIOCHIRURGIA – FACOLTÀ DI MEDICINA E CHIRURGIA, UNIVERSITÀ DEGLI STUDI; DIRETTORE: PROF. M. VIGANÒ – 03/2003 – 08/2004 – PAVIA, ITALIA

Attività chirurgica in sala operatoria, attività clinica di reparto ed attività ambulatoriale preoperatoria e postoperatoria. Attività clinica di gestione dei trapianti cardiaci.

### MEDICO SPECIALIZZANDO – DIVISIONE DI CARDIOCHIRURGIA; AZIENDA OSPEDALIERA DI PERUGIA; RESPONSABILE: DOTT. T. RAGNI – 09/2004 – 06/2006 – PERUGIA, ITALIA

Attività chirurgica in sala operatoria, attività clinica di reparto ed attività ambulatoriale preoperatoria e postoperatoria. Attività di ricerca e produzione di pubblicazioni scientifiche.

### MEDICO SPECIALIZZANDO IN CARDIOCHIRURGIA – FACOLTÀ DI MEDICINA E CHIRURGIA, UNIVERSITÀ DEGLI STUDI; DIRETTORE: PROF. M. VIGANÒ – 07/2006 – 02/2007 – PAVIA, ITALIA

Attività chirurgica in sala operatoria, attività clinica di reparto ed attività ambulatoriale preoperatoria e postoperatoria. Attività clinica di gestione trapianti cardiaci.

### MEDICO SPECIALIZZANDO IN CARDIOCHIRURGIA – AZIENDA OSPEDALIERA DI PERUGIA; RESPONSABILE: DOTT. T. RAGNI – 03/2007 – 10/2007 – PERUGIA, ITALIA

Attività chirurgica in sala operatoria, attività clinica di reparto ed attività ambulatoriale preoperatoria e postoperatoria. Attività di ricerca e produzione di pubblicazioni scientifiche.

**CARDIOCHIRURGO CON CONTRATTO ANNUALE LIBERO-PROFESSIONALE – DIVISIONE DI CARDIOCHIRURGIA; AZIENDA OSPEDALIERA DI PERUGIA; RESPONSABILE: DOTT. T. RAGNI** – 02/2008 – 04/2010 – PERUGIA, ITALIA

Attività chirurgica in sala operatoria, attività clinica di reparto ed attività ambulatoriale preoperatoria e postoperatoria. Attività di ricerca scientifica e produzione di pubblicazioni mediche.
**Particolare esperienza nel prelievo endoscopico della vena grande safena e dell'arteria radiale per gli interventi di bypass coronarico.**

**PROCTOR ITALIANO CON CONTRATTO LIBERO-PROFESSIONALE A TEMPO IDETERMINATO – MAQUET ITALIA S.P.A., MAQUET CARDIOVASCULAR LLC** – 01/09/2009 – 30/04/2010 – MILANO, ITALIA

Proctor italiano per il sistema "Vasoview" di prelievo endoscopico di condotti per bypass coronarico; tale contratto prevedeva l'iniziazione e l'affiancamento di altri cardiochirurghi presso altri centri italiani, nonché il training di altre equipe, sempre italiane, sia nella tecnica di prelievo che nell'utilizzo delle più avanzate tecnologie, presso la Cardiochirurgia di Perugia.

**CARDIOCHIRURGO CON CONTRATTO LIBERO-PROFESSIONALE A TEMPO INDETERMINATO – DIVISIONE DI CHIRURGIA CARDIOVASCOLARE, CITTÀ DI LECCE HOSPITAL, GVM (RESP. DOTT. G. ESPOSITO)** – 01/05/2010 – 30/06/2012 – LECCE, ITALIA

**Indirizzo:** Via Prov. per Arnesano km 4, 73100, Lecce, Italia

- Attività chirurgica di sala operatoria, compresa la reperibilità attiva come secondo aiuto negli interventi urgenti / emergenze e come secondo operatore nella gestione chirurgica delle principali complicanze postoperatorie (**Particolare esperienza nelle tecniche di ricostruzione ibrida dell'arco aortico e dell'aorta toracica)**
- Guardie di terapia intensiva.
- Guardie di repartocardiochirurgico.
- Gestione clinica dei pazienti in collaborazione con i cardioanestesisti e i cardiologi.
- Ambulatorio cardiochirurgico pre-operatorio e post-operatorio.
- Attività di ricerca e produzione di pubblicazioni scientifiche.

**CARDIOCHIRURGO CON CONTRATTO LIBERO-PROFESSSIONALE A TEMPO INDETERMINATO – DIPARTIMENTO DI CHIRURGIA CARDIOVASCOLARE, MARIA BEATRICE HOSPITAL, GVM (RESP. DOTT. G. POPOFF)** – 09/07/2012 – 14/05/2016 – FIRENZE, ITALIA

**Sito Internet:** http://www.gvmnet.it/it/strutture-sanitarie/maria-beatrice-hospital-firenze

- Attività chirurgica di sala operatoria, con reperibilità attiva come primo aiuto negli interventi urgenti / emergenze e come primo operatore nella gestione chirurgica delle complicanze postoperatorie. (**Particolare esperienza nella rivascolarizzazione miocardica con doppia arteria mammaria e mediante ricostruzione coronarica)**
- Guardie di terapia intensiva.
- Guardie di reparto.
- Gestione clinica pre- e post-operatoria dei pazienti.
- Ambulatorio cardiochirurgico pre- e post-operatorio.
- Attività di ricerca e produzione di pubblicazioni scientifiche.

**MEDICO DELL'UNITA DI TERAPIA SUB-INTENSIVA E INTENSIVA COVID-19 – ISTITUTO CLINICO CASALPALOCCO ROMA-3 COVID-19 HOSPITAL, GVM CARE & RESEARCH** – 01/03/2020 – 01/07/2021 – ROMA, ITALIA

**CARDIOCHIRURGO CON CONTRATTO LIBERO-PROFESSIONALE A TEMPO INDETERMINATO – U.O. DI CARDIOCHIRURGIA, VILLA TORRI HOSPITAL, GVM CARE & RESEARCH** – 15/05/2016 – Attuale – BOLOGNA, ITALIA

- Cardiochirurgo Primo Operatore (**Particolare esperienza nelle tecniche cardiochirurgiche mini-invasive)**
- Guardie di terapia intensiva.
- Gestione pre- e post-operatoria dei pazienti in reparto.
- Ambulatorio cardiochirurgico per prime visite e controlli postoperatori.
- Attività di ricerca e produzione di pubblicazioni scientifiche.

**CARDIOCHIRURGO CON CONTRATTO LIBERO-PROFESSIONALE A TEMPO INDETERMINATO – DIVISIONE DI CHIRURGIA CARDIOVASCOLARE, MARIA CECILIA HOSPITAL, GVM CARE & RESEARCH** – 15/05/2016 – Attuale – COTIGNOLA (RA), ITALIA

- Cardiochirurgo Primo Operatore (**Particolare esperienza nelle tecniche cardiochirurgiche mini-invasive)**
- Guardie di terapia intensiva.
- Gestione clinica pre- e post-operatoria dei pazienti in reparto.
- Ambulatorio cardiochirurgico per prime visite e controlli post-operatori.
- Attività di ricerca e produzione di pubblicazioni scientifiche.

## ISTRUZIONE E FORMAZIONE

11/1994 – 04/2002 Perugia, Italia
**LAUREA IN MEDICINA E CHIRURGIA** Facoltà di Medicina e Chirurgia

Tesi di Laurea sperimentale dal titolo "Rimodellamento Inverso Del Ventricolo Sinistro Dopo Ricostruzione Chirurgica Della Valvola Mitrale" presentando dati raccolti dall'attività chirurgica della Divisione di Cardiochirurgia di Perugia.

**Campo di studio** Universitaria

01/1996 – 12/1997 Perugia, Italia
**INTERNATO DI CHIRURGIA TORACICA** Divisione di Chirurgia Toracica, Istituto di Chirurgia Generale, Università degli studi di Perugia;

- Esperienza chirurgica e clinica relative alle principali patologie toraciche.
- Primi rudimenti di pratica chirurgica.

**Campo di studio** Universitaria

11/2002 – 11/2007 Pavia, Italia
**SPECIALIZZAZIONE IN CARDIOCHIRURGIA** Facoltà di Medicina e Chirurgia, Università degli Studi di Pavia. Direttore: Prof. M. Viganò

06/03/2023 – 08/03/2023 Ancona, Italia
**FUTURE CLUB MASTERCLASS - TRANSAXILLARY ANCONA** Corcym

**Sito Internet** https://corcym.com/academy

08/04/2024 – 10/04/2024 Vicenza, Italia
**FUTURE CLUB MASTERCLASS - ENDOSCOPIC APPROACH** Corcym

**Sito Internet** https://corcym.com/academy

07/05/2025 – 09/05/2025 Ancona, Italia
**FUTURE CLUB MASTERCLASS - TRANSAXILLARY ANCONA** Corcym

**Sito Internet** https://corcym.com/academy

15/05/2025 – 16/05/2025 Bari, Italia
**MIDCAB AND MULTIVALVULAR MINIMALLY INVASIVE APPROACH 1ST COURSE WITH LIVE SURGERY** MICS ACADEMY

**Sito Internet** https://mics.mitralacademy.it/it-IT/Corsi

## COMPETENZE LINGUISTICHE

Lingua madre: **ITALIANO**

Altre lingue:

| | COMPRENSIONE | | ESPRESSIONE ORALE | | SCRITTURA |
|---|---|---|---|---|---|
| | Ascolto | Lettura | Produzione orale | Interazione orale | |
| **INGLESE** | B2 | C1 | B1 | B2 | C1 |
| **GRECO** | B1 | B1 | B1 | B1 | B1 |

*Livelli: A1 e A2: Livello elementare B1 e B2: Livello intermedio C1 e C2: Livello avanzato*

## PUBBLICAZIONI

2003

### A case of pseudoaneurysm of the left ventricular lateral wall. Diagnosis and surgical treatment

The development of a pseudoaneurysm after myocardial infarction is a rare complication. Furthermore clinical and instrumental diagnosis is often difficult.
We report the case of a 73-year-old female patient who presented with clinical signs of mild cardiac failure but with no previous cardiac events and no clinical or electrocardiographic evidence of myocardial necrosis. The echocardiogram was suggestive of a left ventricular pseudoaneurysm. To assess the anatomical pattern computed tomography, angioscintigraphy and magnetic resonance were necessary. The difficult diagnosis and the surgical treatment are discussed.

Ital Heart J Suppl . 2003 Apr;4(4):340-3

2003

### Complex mitral valve repair associated with chordal replacement: a study on 62 consecutive patients

Oral presentation at 15th Annual Meeting of the Mediterranean Association of Cardiology and Cardiac Surgery. Beirut, Lebanon, September 10th-13rd 2003.

15th Meeting of Mediterranean Association of Cardiology & Cardiac Surgery. Beirut, Sept 10-13 2003.

2003

### Pseudoaneurisma infettivo dell'aorta ascendente dopo trapianto cardiaco. A proposito di un caso

Comunicazione all'adunanza del 20 novembre 2003 della Società Medico Chirurgica di Pavia.

Boll Soc Med Chir Pavia. 2003; 116: 147-152

2004

### Triangular resection and folding of the posterior mitral leaflet: a new repairing option

Objectives: Conservative treatment of the posterior mitral leaflet prolaps and flail includes quadrangular resection, sliding plasty and insertion of annuloplasty ring. This procedure implies: resection of a large amount of tissue with all chordae tendinae and deformation of the annulus resulting in a rigid posterior leaflet and risk of annular dehiscence. To avoid these problems we tried a new technique. Short term results are reported. Methods: Ten patients with mitral insufficiency and prolapsing posterior leaflet underwent mitral repair. A triangle of posterior leaflet tissue with the base on the free margin and the apex towards mitral annulus was excised sparing the second order chordae. The leaflet was reconstructed with interrupted 6/0 ePTFE stiches. A folding plasty was then performed to plicate the excess of leaflet tissue and ePTFE artificial chordae were implanted on the new leaflet free margin. All patients received partial or complete annuloplasty ring. Transesophageal echocardiography was performed after repair and transthoracic thereafter. Results: No patient required a second procedure on the repaired valve. There was no hospital mortality and all patients are alive at a mean follow-up of ten months Nine patients are in NYHA class I and 1 patient in NYHA class II due to recurrent atrial fibrillation. Echocardiographic assessment shows trivial mitral insufficiency in 2 patients and mild in 1. End-diastolic diameter ranged from 51.9 + 4.9 preoperatively to 49.4 + 5.2 postoperatively while end-sistolic diameter ranged from 32.4 + 4.3 to 30 + 3.1. Mean left atrial diameter was unchanged (45 vs 45.4). Posterior leaflet motion was present in 5 patients and impaired in 5. Conclusions: Although the small number of patients at short term follow-up this option seems to achieve similar results as traditional repairing techniques. The advantages could be the preservation of second order chordae, the integrity of mitral annulus and possibly a better leaflet motion.

XXII Congresso Nazionale della Società Italiana Chirurgia Cardiaca, Bologna 6-9 novembre 2004

2005

### Non invasive Midterm Follow-Up of Radial Artery Bypass Grafts With 16-Slice Computed Tomography

Oral presentation at 17th Biennial Congress of Association of Thoracic and Cardiovascular Surgeon of Asia. Manila, November 20th-23rd 2005

17th Congress of Association of Thoracic and Cardiovascular Surgeon of Asia. Manila, 20-23/11/2005

2006

## Triangular resection and folding of posterior leaflet for mitral valve repair

The conventional treatment of mitral insufficiency, due to posterior leaflet prolapse, is quadrangular resection. This technique sacrifices a great amount of valve tissue resulting in leaflet stiffness and altered annular geometry. To avoid such problems we performed a small triangular leaflet resection sparing the second-order chordae, a folding plasty, implantation of artificial chordae, and annuloplasty. Fourteen patients underwent this procedure. No hospital death and no repair failure were observed. Echocardiography at 12 months on 12 patients showed trivial incompetence in three and mild in one and an overall improvement of end-diastolic and end-systolic diameters. Our technique has the main objectives of sparing second-order chordae and subvalvular apparatus in order to preserve mobility of the posterior mitral leaflet, left ventricular geometry, and function. Preliminary results are encouraging.

J Card Surg. 2006 May-Jun;21(3):274-6; discussion 277

2006

## Sostituzione valvolare aortica con la bioprotesi stentless pericardica SOLO in ministerntomia al 3° spazio intercostale

Comunicazione all'adunanza del 24 novembre 2006.

Boll Soc Med Chir Pavia 2006; 119: 485 – 504.

2006

## Evaluation of a scoring system to predict the risk of acute renal failure in cardiac surgery

Presentato come poster al XXIII Congresso nazionale della SICCH (Società Italiana Chirurgia Cardiaca), Roma 2 – 5 dicembre 2006.

Di Bella I, Ciampichini R, Da Col U, Di Manici G, Koukoulis G, Ramoni E, Ragni T.

2007

## Cardiac hemangioma of the right atrium: a possible cause of cerebellar stroke

Cerebrovasc Dis. 2007;24(1):154-5

2007

## Short–Term Hemodinamic Performance of the Sorin Freedom SOLO Stentless Valve

**Background and aim of the study:** The new Sorin Freedom SOLO pericardial stentless valve is designed for supra-annular implantation, and requires only one running suture. It can be implanted with a short cross-clamp time, and is designed to offer the same hemodynamic advantages of other stentless valves. The study aim was to evaluate the prospective postoperative and two-month follow up hemodynamic performance of this bioprosthesis.
**Methods:** Thirty patients (13 males, 17 females; mean age 75.6 +/- 6.21 years) with severe aortic stenosis underwent valve replacement with the Sorin Freedom SOLO stentless valve. All patients underwent transthoracic echocardiography before surgery, before hospital discharge, and at two months' follow up. The peak and mean transprosthetic gradients, telediastolic and telesystolic diameters, septal and posterior wall thicknesses, total and indexed ventricular mass volume and left ventricular ejection fraction were evaluated.
**Results:** Both, the transprosthetic peak gradient and mean gradient decreased significantly during the first two months ($p < 0.05$ and $p < 0.001$, respectively). The telediastolic diameter was significantly reduced between preoperative evaluation and follow up ($p < 0.05$). The interventricular septum thickness was decreased significantly after two months ($p < 0.001$), as was the posterior wall thickness, albeit to a lesser degree ($p < 0.05$). Both, total and indexed ventricular mass volume showed a significant regression at the two months follow up ($p < 0.001$).
**Conclusion:** The Sorin Freedom SOLO stentless valve shows good hemodynamic performance, with an early and highly progressive left ventricular remod eling. If these data are confirmed in future studies, the SOLO prosthesis might represent a safe alternative to the use of conventional stentless valves.

J Heart Valve Dis 2007; 16: 546-550.

2007

## La tecnica mininvasiva port-access per i reinterventi sulla valvola mitrale

Affronti A, Ricci D, Ramoni E, Longobardi A, Rossi A, M. Viganò

Boll Soc Med Chir Pavia 2007; 120: 445-466. Comunicazione all'adunanza del 16 novembre 2007.

2007

## Surgical treatment of ascending aorta and innominate artery trunk aneurysm with displaced brachiocephalic vessels

Scrivi qui la descrizione...The surgical treatment of ascending aortic and arch aneurysms, even though technically complex and requiring care to avoid neurological sequelae, is well established. Nevertheless, the presence of a significant innominate artery trunk aneurysm implies an adaptation of the surgical options available. We report a case of an aortic aneurysm that involved the ascending aorta, the proximal transverse arch and the brachiocephalic trunk with cranial displacement of the right subclavian and common carotid arteries. This pattern, meant that it was mandatory to change the usual surgical approach. We resected the ascending aorta and the proximal aortic arch replacing them with a dacron prosthesis in a usual fashion. Nevertheless, we were compelled to perform the anastomoses of the innominate trunk branches in an extrathoracic fashion. Furthermore, to ensure an uninterrupted cerebral perfusion, the usual surgical steps were personalized. The anatomical findings, computed tomographic images, surgical technique, cerebral protection and postoperative evaluation are described.

J Cardiovasc Med (Hagerstown). 2007 Oct;8(10):852-4.

2008

## Off pump technique: a systematic alternative for myocardial revascularization?

**Objective**
Many studies failed to show that off-pump myocardial revascularization achieved better results than on-pump revascularization, and also invited a lot of criticism for the criteria used for selection and inclusion of patients. To avoid these limitations, we systematically treated all candidates for coronary surgery with this technique evaluating early and follow-up results.
**Methods**
In 257 prospective consecutive patients, off-pump myocardial revascularization was performed by the same surgeon without any exclusion criteria. Hospital mortality and main postoperative complications were analysed. After a mean follow-up of 27.50 months, 245 patients (98.4%) were contacted to evaluate late mortality, recurrence of angina, myocardial infarction and need for new revascularization.
**Results**
Conversion to extracorporeal circulation was necessary in 10 cases. Hospital mortality was eight patients (3.11%). Postoperative complications were reexploration for bleeding (2.72%), myocardial infarction (1.17%), atrial fibrillation (21.01%), stroke (0.39%) and renal failure (3.5%). Follow-up overall mortality was 16 patients (6.53%) with two cardiac-related deaths (0.82%). Total cardiac events at follow-up occurred in 20 patients (8.16%). There were two cardiac deaths, angina in 15 cases, silent myocardial ischaemia in two and myocardial infarction in one. New revascularization procedures were necessary in seven cases (2.86%). Statistical results showed that the European System for Cardiac Operative Risk Evaluation rate was predictor of 30-day and overall mortality. Multivariate analysis showed that age was a predictor of overall mortality whereas female sex was a predictor of cardiac events.
**Conclusion**
In conclusion, systematic off-pump surgery was not associated with a higher rate of mortality, morbidity and cardiac events compared to on-pump technique.

J Cardiovasc Med (Hagerstown). 2008 Sep;9(9):899-904

2008

## 3D multi-detector computed tomography reconstruction of an idiopathic pulmonary artery aneurysm

Scrivi qui la descrizione...

J Cardiovasc Med (Hagerstown) 2008, 9:1287–1289.

2009

## An unusual left ventricular outflow pseudoaneurysm: usefulness of echocardiography and multi-detector computed tomography for surgical repair

Left ventricular outflow tract (LVOT) pseudoaneurysm is a rare but potentially lethal complication, mainly after aortic root endocarditis or surgery. Usually it originates from a dehiscence in the mitral-aortic intervalvular fibrosa and it arises posteriorly to the aortic root. Due to these anatomical features, its imaging assessment is challenging and surgical repair requires complex procedures. An unusual case of LVOT pseudoaneurysm is described. It was detected

by transthoracic ecocardiography 7 months after aortic root replacement for acute endocarditis. Multidetector computed tomography (MDCT) confirmed the presence of a pouch located between the aortic root and the right atrium. Computed tomography also detected the origin of the pseudoaneurysm from the muscular interventricular septum of the LVOT, rather below the aortic valve plane. It was repaired with an extracardiac surgical approach, sparing the aortic root bioprosthesis previously implanted. The high-resolution three-dimensional details provided by the preoperative MDCT allowed us to plan a simple and effective surgical strategy.

Cardiovasc Intervent Radiol. 2009 Jan; 32(1):188-91

2009

## A huge aortic arch aneurysm mimicking massive pulmonary artery embolism

An 85-year-old man, who had previously undergone coronary bypass surgery, was subjected to a computed tomography (CT) scan because of an echocardiographic suspect of massive pulmonary embolism. A huge aortic arch aneurysm compressed the pulmonary arteries (Fig. 1 ). Sudden cardio-respiratory failure required mechanical ventilation. At this stage, surgeons considered him inoperable for high risk. He died of multi-organ failure.

Eur J Cardiothorac Surg. 2009 Nov;36(5):934

2009

## Valutazione emodinamica mediante ecocardiografia trans-toracica della nuova bioprotesi porcina St. Jude Epic Supra

Comunicazione nella categoria “miglior abstract" al XIV congresso nazionale della SIEC (Società Italiana di Ecografia Cardiovascolare), Milano 8-10 settembre 2009.

Ramoni E, Da Col U, Di Bella I, Di Manici G, Ayiomamitis M, Contine A, Perticoni S, Ragni T.

2009

## Causa rara di disfunzione di protesi stentless in sede aortica

Presentato come poster al XIV congresso nazionale della SIEC (Società Italiana di Ecografia Cardiovascolare), Milano 8-10 settembre 2009.

Bardelli G, Di Manici G, Di Lazzaro D, Ramoni E, Ragni T

2010

## Repair Of Posterior Left Ventricular Aneurysm Through Transatrial Approach

Repair of posterior left ventricular ischemic aneurysms implies an extracardiac approach to reshape the ventricular geometry frequently associated with mitral surgery. A transatrial technique was described for lesions following mitral surgery or for subvalvular idiopathic cases. A transmitral approach was used for ischemic or traumatic pseudoaneurysm. We describe a case of postinfarction posterior true aneurysm with associated mitral incompetence. Both lesions were treated through an intracardiac approach. The posterior mitral leaflet was detached posteriorly to close the aneurysm with a patch, and the valve replaced sparing all subvalvular apparatus. This technique seems to be safe and allows to treat both lesions avoiding ventriculotomy

J Card Surg 2010;25:23-25

## Postinfarction septal dissection and rupture evolved as an inferobasal pseudoaneurysm. A specific anatomical pattern

In rare cases of posterior myocardial infarction, septal rupture is the consequence of a dissecting interventricular hematoma that evolves as a fibrotic septal chamber with two separate communications, towards left and right ventricle. This unusual anatomical pattern is generally unsuspected and described as a normal interventricular defect associated with a basal left ventricular aneurysm or pseudoaneurysm. We present a case where echocardiography and ventricular angiography did not detect this situation. As surgical implications are important, this peculiar anatomical pattern should be suspected especially in patients with asymptomatic postinfarction posterior septal rupture or in those with minimal clinical impairment.

J Cardiovasc Med (Hagerstown). 2010 Aug;11(8):622-4.

2010

## Rara endocardite da abiotrophia defectiva. Presentazione di un caso e revisione della letteratura

Endocarditis by Abiotrophia defectiva is rare but associated with high rates of complications and mortality. The microbiological identification is challenging. Two cases without preexisting valvulopathy and one case with mitral-aortic involvement are described in the literature. A case of this subacute form of endocarditis, with normal mitral and aortic valves, is reported. Surgery was necessary, and mitral repair and aortic homograft implantation were performed with good 3-month results. In case of subacute endocarditis, especially when etiology is difficult to detect, Abiotrophia defectiva should be suspected.

.

G Ital Card 2010; 11 (7-8): 599-601

2010

## Is lower limb venous drainage during peripheral extracorporeal membrane oxygenation necessary?

Extracorporeal membrane oxygenation (ECMO) is becoming a gold standard in acute heart failure, not responsive to inotrops and intra-aortic balloon contrapulsation. This diffusion is due to the possibility to implant it through peripheral cannulation and to perform long-time assistance. Nevertheless, this technique implies some problems concerning inferior limb perfusion. It is widely accepted that arterial distal cannulation and perfusion of the limb is mandatory, especially for long periods of assistance; but the necessity to implant a distal venous drainage is still discussed. We would like to present our experience on peripheral ECMO where we could avoid venous distal drainage uneventfully.

ASAIO J. 2010 Jan-Feb;56(1):35-6

2010

## Posterior mitral leaflet: new anatomical insight and review of nomenclature (mitral valve anatomy

**Objectives**
Previous studies described single components of the mitral valve, but somewhat lacked the spatial analysis of their relationship. Moreover, further information is necessary regarding reconstructive surgery. The current work aimed at in-depth analysis of the anatomy of the posterior mitral leaflet (PML) and its changes due to degenerative disease, completing the already existing anatomical information about PML and proposing a reorganization of the actual terminology.
**Methods**
Nine normal PMLs harvested from cadavers have been compared with 12 pathological specimens from partial resection of PML in the course of valve repair in adult patients. Dimensions of smooth and rough surfaces of the PML have been measured and compared and their dimensional relationships have been assessed; the chance of finding chordae tendineae inserting into the smooth, periannular portion of PML as well as their type have been checked. *MEDLINE* has been searched for the most relevant publications about PML anatomy.
**Results**
Observation of normal specimens has confirmed the presence of three types of chordae tendineae: marginal, intermediate and basal, but between the last two, there is some of alternative nature. In degenerative mitral valve disease, the rough part is only 13% greater than the smooth one. In collagen degeneration, both parts contribute in more or less equal proportion to the dimensional increase of the middle scallop, so that the ratio between rough and smooth surface is maintained as in normal specimens.
**Conclusion**
This study reorganizes the previously proposed terminology of PML chordae tendineae. The research identifies the complemental and alternative presence of 'strut' and 'basal' chordae of PML, and it specifies the dimensions of the different anatomical components of the leaflet, in particular of the intermediate scallop. The observations give an accurate anatomical reference for the space of mitral reconstruction with minimal functional impact.

J Cardiovasc Med (Hagerstown). 2010 Nov;11(11):820-6

2010

## Obstruction of the Tricuspid Valve Orifice by a Huge Right Atrial Myxoma Associated with the Carney Complex: A Case Report

Carney complex (CNC) is an inherited autosomal dominant disorder associated with multiple neoplasms. Myxomas associated with CNC differ from their sporadic forms because the former usually develop at a younger age and they may be multicentric and have a tendency to recur. Furthermore, their localization may be atypical. We report the case of a 57-year-old man, with a huge right atrial myxoma obstructing the tricuspid valve orifice. A diagnosis of CNC was established by genetic analysis. The importance of early diagnosis and an adequate follow-up is emphasized.

J Card Surg. 2010 Nov;25(6):674-6

2011
### Left Atrial Roof. An Alternative Minimal Approach for Mitral Valve Surgery

Oral presentation at "Mitral Conclave" 2011. New York, May 5-6 2011

Esposito G, Ramoni E, Mangia F, Bichi S

2011
### Parannular Elliptical Posterior Resection for Mitral Repair: Technique and Five-year Results.

Poster presented at 6th Biennal Meeting 2011 - Joint Meeting of The Society for Heart Valve Disease & Heart Valve Society of America. June 26th - 28th 2011, Barcelona.

Da Col U, Ramoni E, Paris M

2011
### Peripheral extracorporeal membrane oxygenation: a useful option to allow recovery in acute cardiogenic shock

J Cardiovasc Med (Hagerstown). 2011 Sep;12(9):681-5

2011
### The Hybrid Two-Stage “Lupiae" Technique to Treat ExtensiveThoracoabdominal Aortic Aneurysms

Oral presentation at ISMICS 2011 Annual Meeting. Washington DC, June 8-11 2011.

Esposito G, Ramoni E, Bichi S, Cricco AM, Mangia F, Specchia L, Di Francesco A, Spirito F, et Al.

2012
### Hybrid Management of Acute Type A Aortic Dissection with Concomitant Myocardial Infarction

Presentato come poster al XXVI Congresso Nazionale della SICCH (Società Italiana Chirurgia Cardiaca), Roma 10-13 novembre 2012.

Mangia F, Specchia L, Cricco AM, Ramoni E, Lentini S, Di Eusanio G, Gregorini R

2012
### Ventricular Restoration: Results and role of Imaging Methodologies in the Shape Assessment

Presentato come poster al XXVI Congresso Nazionale della SICCH (Società Italiana Chirurgia Cardiaca), Roma 10-13 novembre 2012.

Gregorini R, Ramoni E, Specchia L, Cricco AM, Mangia F, Lentini S, Di Eusanio G.

2013
### Assessment of myocardial protection in course of complex coronary artery reconstruction

Popoff G, Ramoni E, Scardi S, Gliozheni E.
Presentato come poster al10$^{th}$ ICCAD (Coronary Artery Disease), Firenze 13 – 16 Ottobre 2013.

Cardiology. 2013;126,Suppl.2:186.

2013
### Jailing-stent syndrome: successful treatment of angina in a patient with multiple patent DES, through stentectomy and surgical coronary reconstruction.

Popoff G, Ramoni E, Agostini C, Buonamano A.
Presentato come poster al 10$^{th}$ ICCAD (Coronary Artery Disease), Firenze 13 – 16 Ottobre 2013.

Cardiology. 2013;126,Suppl. 2:187

2014

## Modified Elephant Trunk Technique for Chronic Aortic Dissection: The "Double Elephant Trunk"

The most widely used technique for chronic dissection of the aortic arch and thoracoabdominal aorta is the “elephant trunk” (ET). A technique, in which an original modification of the ET technique was necessary to avoid visceral malperfusion due to the obliteration of the patent false lumen from where splanchnic arteries arose, is presented.

J Card Surg. 2014 May;29(3):364-7

2015

## Multiloculated Postinfarction Ventricular Septal Defect

J Card Surg. 2015 Jun;30(6):515

2015

## Parannular Elliptical Posterior Resection: A Low-Impact Reparative Technique for Mitral Valve Prolapse

Objective
Although effective, Carpentier technique for mitral regurgitation presents two “Achille's heel”: the resection of the whole prolapsing section of posterior mitral leaflet (PML) including chordae tendinae and the annular distortion due to plication. An alternative technique of limited PML resection, which preserves mitral anatomy decreasing the impact on valve function, and 9-year outcome are presented.
Methods
Since April 2005 till March 2014, of 205 patients affected by mitral prolapse scheduled for repair (mitral valve repair), 54 patients have been included in the study. The rationale of the new technique was to limit PML resection to achieve a fair reduction of the prolapsing scallop(s) height, to avoid leaflet and annular distortion, and to spare the coaptation surface and other substantial structures. According to the observation that the posterior smooth zone of PML is quite free from chordal insertions, an elliptical slice of tissue was resected from this area. Annuloplasty and neochordal insertion when indicated completed the procedure.
Results
Up to 9 years of follow-up was 98% complete. One inhospital death, two late noncardiac deaths, one redo operation due to endocarditis were reported. On late follow-up, 92% patients were on New York Heart Association class I. Late echocardiography showed stability of repair (regurgitation grade of ≤1 in 92% of patients). Nearly two third of valves preserved good PML mobility.
Conclusions
The parannular elliptical posterior leaflet resection, providing excellent stable midterm results, seems to be a safe alternative method for repair of PML prolapse. It avoids distortion and weakening of annulus and leaflet, and it allows restoring a proper coaptation surface and maintains a satisfactory PML motion.

Innovations. 2015 Jul-Aug;10(4):252-7; discussion 257.

2017

## "Jailing-stent syndrome": open extensive coronary stentectomy and reconstruction in patients with multiple patent coronary stent and residual ischemia.

Presentazione al XXVIII Congresso nazionale della SICCH (Società Italiana Chirurgia Cardiaca), Roma 25 - 27 novembre 2017.

Popoff G, Ramoni E

2017

## Complex Coronary Artery Reconstruction as Treatment for Left Anterior Descending Artery Aneurysm After Failed Percutaneous Repair

Presentazione al XXVIII Congresso nazionale della SICCH (Società Italiana Chirurgia Cardiaca), Roma 25 - 27 novembre 2017.

Popoff G, Ramoni E.

2017

## Negative Pressure Dressing for Prevention of Post-Sternotomy Complications in High Risk Patients

Presentazione al XXVIII Congresso nazionale della SICCH (Società Italiana Chirurgia Cardiaca), Roma 25 - 27 novembre 2017.

Ramoni E, Popoff G.

2019

## Right Anterior Minithoracotomy for surgical AVR as a standard of care in Intermediate Surgical Risk patients

**Purpose:** We believe Right Anterior miniThoracotomy for surgical AVR might be safe and effective in those patients with Intermediate Surgical Risk patients (4%<STS Risk Score<8%) and severe calcified aortic stenosis, ideally suitable for TAVI procedures in the PARTNER 2 Trial setting.
**Methods:** Retrospectively, from January 2010 to June 2018, we collected 102 consecutive adult patients with intermediate surgical risk, undergoing isolated surgical aortic valve replacement (SAVR) for tricuspid severe aortic stenosis. Minimally invasive aortic valve replacement was performed by a single surgeon, through a 4 to 6 cm long RAT at the third intercostal space without rib avulsion or ligation of the RIMA. We perform a complete central cannulation with normotermic systemic perfusion and blood-based cardioplegia.
**Results:** All procedure went successfully. Complete central cannulation and RAT approach have been used in all cases. Population male 36,36%; mean age of 83,4 ± 3,8 yrs; mean STS Risk Score of Mortality 4,81% ± 0,71% [range 4,02%-6,83%] and of Morbidity/Mortality 24,57% ± 4,65%. Median implanted prosthesis diameter was 23 mm; mean CPB duration was 49,3 ± 14.9 minutes; aortic cross-clamping time was 36,8 ± 14,7 minutes; median ventilation time was 8 hrs; median ICU stay 2,5 days. PM implantation rate was 2,17%. The total in-hospital stay median duration was 7 days. Observed 30-day mortality rate was 3,12% (2 pts), observed Morbidity/Mortality rate was 9,3%. No paravalvular aortic regurgitation more than mild at discharge was observed. **Conclusion:**
our approach is safe and effective for surgical aortic valve replacement in intermediate-risk patients with optimal results

2019

## Rapid Implantation and Right Anterior Minithoracotomy approach for surgical AVR

**OBJECTIVE:** We present our surgical AVR experience in this field, with RAT access and sutureless valves. We believe the technique optimization and a minimal invasive approach are pivotal in making this procedure effective.
**METHODS:**
Retrospectively, from July 2016 to May 2018, we collected 60 consecutive elderly patients (≥80 y.o.), undergoing isolated sAVR for tricuspid severe aortic stenosis. Minimally invasive sAVR was performed through a small RAT at the third intercostal space without rib avulsion or ligation of the RIMA. we perform a complete central cannulation with blood-based cardioplegia.
**RESULTS:**
All procedure went successfully. Complete central cannulation, RAT approach and sutureless prostheses have been used in all cases. Population: male 37,5%; mean age of 83,5 ± 2,2 yrs; mean STS Risk Score of Mortality 3,61% ± 1,23% and of Morbidity/Mortality 19,66% ± 4,58%. implanted prostheses were M (32), L (20), XL (5), S (3); mean CPB duration was 32,6 ± 8,2 minutes; aortic cross-clamping time 17,6 ± 3,7 minutes; median ventilation time 6,5 hrs; median ICU stay 2 days. PM implantation rate was 1,7%. The total in-hospital stay median duration was 7 days. Observed 30-day mortality rate was 1,7% (1pts), observed Morbidity/Mortality rate 5,88%. None of our patients had paravalvular aortic regurgitation more than mild at discharge.
**CONCLUSIONS:**
Minimally invasive sAVR with suturless prostheses is an effective option for aortic valve replacement in elderly patients. Complete central cannulation, RAT approach and a thorough optimization of the implantation technique are the key points to carry out a fast and safe procedure

2020

## Complete Central Cannulation For Minimally Invasive Tirone David Procedure Via Partial Upper Sternotomy

**Objective:** Demonstrate technical safety and feasibility of complete central cannulation in a Tirone-David procedure via partial mini-uppersternotomy. Minimally invasive surgery helps to reduce blood loss, post-operative pain and to improve the recovery. This procedure can be carried out with good results avoiding peripheral cannulation: we strongly believe that the total central cannulation technique is pivotal to avoid all the disadvantage of a retrograde perfusion and the surgical trauma to expose the femoral vessels. **Methods:** Retrospectively, from July 2010 to May 2018, we collected 84 consecutive patients, undergoing Tirone-David procedure for aortic root with or without aortic valve disease. A minimally invasive approach via mini-uppersternotomy with a 7-cm skin incision was performed in a single-

Surgeon setting with complete central cannulation, normotermic systemic perfusion and blood-based cardioplegia. Based on our experience we simplified the procedure: we use a systematic approach to assess the potential valve disfunction and to measure the optimal vascular graft size.
**Results:** All procedure went successfully. Total central cannulation (inflow to the proximal aortic arch and outflow to the right atrium) was performed in every case.Population: male 81% with a mean age of 52,6±14,4 yrs; the mean STS score 1,92% ±0.86%. Results: the mean CPB duration was 138,5±19,7 minutes with an aortic cross-clamping time of 124,1±19,7 minutes; the mean ventilation time was 5,4±2,1 hours; mean ICU stay was 2,1±1,2 days. The total in-hospital stay mean duration was about 8 days. Observed 30-day mortality rate was 1,2%. None of our patients had aortic regurgitation more than mild at discharge. Half of the patients was discharged home, 36.9% to rehabilitation centers and the rest to other Institutions.At our 5-year follow-up 97% of patients were alive with a 91% of freedom from aortic regurgitation more than mild. **Conclusion:** The Tirone-David procedure is an effective option for aortic valve and/or root disease, with good result even in a minimally-invasive approach. Beyond a better cosmetic results, a less invasive approach allows a faster return to the normal life.

2020
## Role of the cardiac surgeon in the COVID-19 hospital

G Ital Cardiol (Rome) . 2020 Jul;21(7):526.

2021
## ECMO for COVID-19 patients in Europe and Israel

Intensive Care Med. 2021 Mar;47(3):344-348.

**Link** https://link.springer.com/article/10.1007/s00134-020-06272-3/figures/1

2021
## Aortic Valve Reimplantation Through Right Anterior Minithoracotomy With Totally Central Cannulation

**BACKGROUND:** To examine the initial experience with aortic valve reimplantation ("Tirone-David" procedure) through right anterior mini-thoracotomy (RAT). At our institution, isolated valve operations have been routinely performed by RAT for at least 10 years. Based on it, and on our experience with aortic valve reimplantation using mini-sternotomy and totally central cannulation, from October 2020 we started to perform Tirone-David procedures through RAT, to combine advantages of the mini-thoracotomy access with the effectiveness of the aortic valve reimplantation procedure.
**METHODS:** From 01-10-2020 we prospectively collected preoperative, intraoperative and in-hospital postoperative data of patients undergoing Tirone-David procedure via RAT with totally central cannulation.
**RESULTS:** From 01-10 to 10-12-2020, 8 consecutive patients underwent aortic valve reimplantation for aortic root and ascending aorta replacement, both without aortic valve insufficiency and with different degrees of aortic regurgitation. Mean age was 55 years ± 5.8; 6 was male. Mean left-ventricle ejection fraction was 70%±6.4%. In all cases RAT with a 5-6 cm skin incision was performed in a single-Surgeon setting with complete central cannulation (inflow to the proximal aortic arch and outflow from the right atrium) (figure), normothermic systemic perfusion and crystalloid-plus-blood cardioplegia. Based on our experience gained with mini-sternotomy, we simplified the Tirone-David technique, using a systematic approach to assess the potential valve disfunction and to measure the optimal vascular graft size (figure). All the procedures went successfully. The mean CPB duration and cross-clamping time were respectively 146±55.9 and 129.5±51.9 minutes; the mean ventilation time was 5.4±21 hours; the mean ICU stay was 2.1±1.2 days. The mean total in-hospital stay duration was 8 days. No patients died during the hospital course. None had aortic regurgitation more than mild at discharge. The only noteworthy complication was postoperative transitional atrial fibrillation in 2 patients.
**CONCLUSIONS:** Our preliminary experience would suggest that the proven efficacy and safety of aortic valve reimplantation, can also be guaranteed with a particularly minimally invasive approach such as RAT with totally central cannulation. These encouraging data need to be confirmed by a broader case series and data of the follow-up.

ISMICS 2021 Annual Meeting. Warsaw, June 18-20 2021.

**Link** https://meetings.ismics.org/abstracts/2021/images/g175_1.JPG

2021
## Combined Valve and Ascending Aorta Procedure through Right Anterolateral Minithoracotomy

**BACKGROUND:** Nowadays minimally invasive cardiac surgery treats different type of valve and ascending aorta diseases, sometimes even combined. In our video, we show a combined procedure of mitral valve repair (MVR) and Bentall operation through a right anterior minithoracotomy (RAT).

**METHODS:** A young male patient, with no significant comorbidities, was selected as a candidate for the procedure. After RAT approach, cardiopulmonary bypass was ensured with central arterial cannulation at the aortic arch and percutaneous venous cannulation through the right femoral vein. MVR was performed first, through a standard left atrial access we implanted a pair of artificial chordae tendineae on P2 and a semi-rigid annuloplasty ring, thereafter a modified Bentall operation by implanting a mechanical valved conduit was carried out.
**RESULTS:** The good result of the procedure is showed by intraoperative transesophageal echocardiography. The operation and hospital stay were uneventful.
**CONCLUSIONS:** RAT could become the routine approach for valve operations, even when combined with ascending aorta surgery.

ISMICS 2021 Annual Meeting. Warsaw, June 18-20 2021.

2021

## Impact of hospital-acquired Covid-19 infection in cardiac surgery. A multicentric study

Background / Study Objective • Covid-19 pandemic has posed significant burden on clinical outcomes and logistics of cardiac surgery • However, little is known on the impact of Covid-19 infection acquired in hospital settings • In a multicentric European collaboration, outcomes of patients who developed hospital-acquired Covid-19 infection after cardiac surgery were analysed • Aim: to investigate the impact of hospital-acquired Covid-19 infection on 30 days and short-term follow-up mortality/morbidity after cardiac surgery.

35th European Association for Cardiothoracic Surgery annual meeting . Barcelona 13-16 ottobre 2021

**Link** https://eacts2021.process.y-congress.com/scientificProcess/Schedule/?setLng=en#filters=[{"name":"fulltext","values":["moscarelli"]}]

2021

## Complex Cardiac Procedures Through Right Anterior Minithoracotomy And Central Arterial Cannulation.

Background and aim. Nowadays right minithoracotomy (RMT) is generally reserved for isolated valve surgery. Conversely, sternotomy is considered the safer approach for complex/combined procedures. We report our early experience with complex surgery through a RMT, describing the technical aspects of our approach. Methods. At our institution, isolated valve operations have been routinely performed by RMT for at least 10 years, and for combined mitro-aortic valvular procedures for at least 5 years, using central arterial cannulation. From 02-2020 we extended such approach to treat 19 patients with complex cardiac lesions who underwent surgery through a 5-to-6 cm anterior/antero-lateral RMT. Cardiopulmonary bypass was established in all cases through central arterial cannulation. The venous return was ensured both centrally, peripherally (percutaneously from right femoral vein), and through double venous cannulation (from superior vena cava and femoral vein), depending on the type of operation. Results. 8 patients underwent Tirone-David procedure, 2 ascending aorta replacements plus mitral valve repair, 2 Bentall operations, 2 ascending aorta replacements, 1 Tirone-David procedure plus mitral valve repair, 1 Bentall procedure plus mitral repair, 1 mitro-aortic replacement plus ascending aorta reduction, 1 Amplatzer-device removal, and 1 repair of a partial atrio-ventricular channel. The operation and hospital stay were uneventful for all patients. Postoperative echocardiography showed no peri-prosthetic leakage or residual valvular regurgitation. Conclusions. Minimally invasive surgery of complex cardiac lesions is feasible, also with advantages of arterial central cannulation. Our approach through a RMT allows optimal visualization at the same time of the entire proximal aorta and mitral valve

XXX congresso nazionale della Società Italiana di Chirurgia Cardiaca. Roma 16-18 dicembre 2021

## HYBRYD TREATMENT FOR CORONARY ARTERY DISEASE CONCOMITANT WITH MINIMALLY INVASIVE CARDIAC VALVE SURGERY

Cardiac valvular surgery concomitant with coronary artery bypass grafting has a higher mortality than isolated valve surgery. Therefore, a hybrid approach that combines the benefits of the low risk of percutaneous coronary angioplasty (PCI) with those of minimally invasive valve surgery, should be considered. At present, data on hybrid valve/PCI procedures are limited to clinical cases and small cases, in which the PCI procedure is usually followed by surgery after about 3 weeks. We report our experience in which valve surgery was first performed with a minimally invasive approach (minithoracotomy or ministernotomy), then followed by coronary revascularization with PCI, to reduce the risks of post–surgical bleeding due to anti–aggregating therapy, in a non–randomized but consecutive case. Between July 2019 and June 2021, 22 patients were treated. Median of the days between surgery and PCI was 8, median of total hospitalization was 13 days. In 6 patients the surgical approach was a ministernotomy, in 16 was performed a right minithoracotomy. In 14 (64%) patients PCI was performed on single coronary vessel, in 5 (22.5%) on 2 coronary vessels and in 3 (13.5%) on 3 coronary vessels. There were no reinterventions for postoperative bleeding. One patient presented gastro–intestinal bleeding from a colon polyp. No patients died during hospitalization, nor at the follow–up

performed by telephone every 6 months. No patients required valve reintervention or coronary artery bypass during hospitalization or follow–up. One patient underwent a new PCI procedure at 7 months. In conclusion, the hybrid approach consisting of minimally invasive valve surgery followed by PCI may offer an alternative to the standard but more complex operation of coronary artery bypass grafting plus valve surgery through complete sternotomy.

European Heart Journal Supplements, Volume 24, Issue Supplement C, May 2022, suac012.049

2022

## Effect of Hospital-associated SARS-CoV-2 Infections in Cardiac Surgery. A Multicenter Study

Background
The effect of hospital-associated SARS-CoV-2 infections in cardiac surgery patients remains poorly investigated, and current data are limited to small case series with conflicting results.
Methods
A multicenter European collaboration was organized to analyze the outcomes of patients who tested positive with hospital-associated SARS-CoV-2 infection after cardiac surgery. The study investigators hypothesized that early infection could be associated with worse postoperative outcomes; hence 2 groups were considered: (1) an early hospital-associated SARS-CoV-2 infection group comprising patients who had a positive molecular test result ≤7 days after surgery, with or without symptoms; and (2) a late hospital-associated SARS-CoV-2 infection group comprising patients whose test positivity occurred >7 days after surgery, with or without symptoms. The primary outcome was 30-day mortality. Secondary outcomes included all-cause mortality or morbidity at early follow-up and SARS-CoV-2–related hospital readmission.
Results
A total of 87 patients were included in the study. Of those, 30 were in the early group and 57 in the late group. Overall, 30-day mortality was 8%, and in-hospital mortality was 11.5%. The reintubation rate was 11.4%. Early infection was significantly associated with higher mortality (adjusted OR, 26.6; 95% CI, 2, 352.6; $P < .01$) when compared with the late group. At 6-month follow-up, survival probability was also significantly higher in the late infection group: 91% (95% CI, 83%, 98%) vs 75% (95% CI, 61%, 93%) in the early infection group ($P = .036$). Two patients experienced COVID-19–related rehospitalization.
Conclusions
In this multicenter analysis, hospital-associated SARS-CoV-2 infection resulted in higher than expected postoperative mortality after cardiac surgery, especially in the early infection group.

Ann Thorac Surg. 2022 Jun 8:S0003-4975(22)00802-5

2022

## CORONARY ARTERY BYPASS GRAFTING WITH BILATERAL INTERNAL THORACIC ARTERY: STERNAL WOUND INFECTIONS IN OBESE PATIENTS

Background and aim
Coronary artery bypass grafting (CABG) with bilateral internal thoracic artery (BITA) is associated with better long-term graft patency and patients' outcomes. Nevertheless, increased onset of sternal deep wound infections especially in obese/diabetic patients was reported. Our purpose is to assess the incidence of deep wound infections in obese patients underwent BITA-CABG.
Methods
From 07-2018 to 0-2022, 172 patients underwent total arterial BITA-CABG at our centre. Patients who underwent combined procedures were excluded. Therefore, the population considered included 148 patients divided into two groups according to BMI: BMI≤30 (115 patients) and BMI>30 (33 patients). Univariate analysis was performed to evaluate the correlation between obesity and sternal wound infections.
Results
The overall population included 89.9% males. The mean age was 65.34±7.86 years. Y-graft was used in 78.4% of patients and the mean number of distal anastomoses was 3.03±0.83. One patient died. There was not repeat revascularization (surgical/percutaneous). The univariate analysis showed statistically higher incidence of sternal deep wound infections (BMI>30: 27.3% vs BMI≤30: 7.8%, p-value 0.005), vacuum-assisted closure therapy (BMI>30: 21.2% vs BMI≤30: 8.7%, p-value 0.047) and reoperation for wound debridement/closure (BMI>30: 24.2% vs BMI≤30: 10.4%, p-value 0.041) in obese patients.
Conclusion
BITA-CABG is an effective technique in patients requiring surgical myocardial revascularization, particularly in those with longer life expectancy. Our study showed an increased incidence of sternal deep wound infections in obese patients. Therefore, attention should be paid in sternal closure and in postoperative wound care. Alternatively radial artery could be considered as the second conduit.

Berardi M, Ramoni E, Ceresa R, et al. XXXI congresso nazionale della SICCH. Roma 10-12 nov 2021

2022

## ACQUIRED COVID-19 INFECTION AFTER CARDIAC SURGERY IN VACCINE ERA: SOMETHING IS CHANGED?

Background and aim
In the prevaccinal era, the patients who underwent cardiac surgery and acquired COVID-19 infection during the hospitalization had a worse outcome, with a high mortality rate. The aim of the study is the retrospective analysis of the patients who contracted COVID-19 infection after cardiac surgery at our institution, in order to evaluate the impact of the vaccine administration on the short-term outcomes.
Methods
From 21/02/2020 to 28/04/2022, 461 patients underwent elective cardiac surgery at our institution; of these 19 patients contracted COVID-19 infection during the hospitalization. These patients were divided into two groups: Pre-vaccine (patients operated between 21/02/2020 to 28/02/2021) and Post-vaccine (patients operated between 01/03/2021 to 28/04/2022, who received at least one dose of vaccine).
Results
The data reported a statistically significant reduction in COVID-19 related symptoms [10(90.9%) Pre-Vaccine vs 0 Post-Vaccine, p-value=0.000], respiratory failure with reintubation [5(45.5%) Pre-Vaccine vs 0 Post-Vaccine, p-value=0.026], COVID-19 ICU stay [6.55 ± 9.74 Pre-Vaccine vs 0 Post-Vaccine, p-value=0.007] and use of corticosteroids [9(81.8%) Pre-Vaccine vs 1(12.5%) Post-Vaccine, p-value=0.003] in the Post-Vaccine group. The 30-days mortality is zero in the Post-Vaccine group, although there is no statistically significant difference between the two groups [3(27.3%) Pre-Vaccine vs 0 Post-Vaccine, p-value=0.107].
Conclusions
The data reported a statistically significant reduction in COVID-19 related symptoms, respiratory failure with reintubation, COVID-19 ICU stay and use of corticosteroids among vaccinated patients. The vaccine has proven to be a valuable tool and may help to improve the outcome of patients who acquired COVID-19 infection after cardiac surgery.

Berardi M, Ceresa R, Ramoni E, et al. XXXI congresso nazionale della SICCH. Roma 10-12 nov 2021

2023

## In-hospital and 6-month outcomes in patients with COVID-19 supported with extracorporeal membrane oxygenation (EuroECMO-COVID): a multicentre, prospective observational study

Background
Extracorporeal membrane oxygenation (ECMO) has been widely used in patients with COVID-19, but uncertainty remains about the determinants of in-hospital mortality and data on post-discharge outcomes are scarce. The aims of this study were to investigate the variables associated with in-hospital outcomes in patients who received ECMO during the first wave of COVID-19 and to describe the status of patients 6 months after ECMO initiation.
Methods
EuroECMO-COVID is a prospective, multicentre, observational study developed by the European Extracorporeal Life Support Organization. This study was based on data from patients aged 16 years or older who received ECMO support for refractory COVID-19 during the first wave of the pandemic—from March 1 to Sept 13, 2020—at 133 centres in 21 countries. In-hospital mortality and mortality 6 months after ECMO initiation were the primary outcomes. Mixed-Cox proportional hazards models were used to investigate associations between patient and management-related variables (eg, patient demographics, comorbidities, pre-ECMO status, and ECMO characteristics and complications) and in-hospital deaths. Survival status at 6 months was established through patient contact or institutional charts review. This study is registered with ClinicalTrials.gov, NCT04366921, and is ongoing.
Findings
Between March 1 and Sept 13, 2020, 1215 patients (942 [78%] men and 267 [22%] women; median age 53 years [IQR 46–60]) were included in the study. Median ECMO duration was 15 days (IQR 8–27). 602 (50%) of 1215 patients died in hospital, and 852 (74%) patients had at least one complication. Multiorgan failure was the leading cause of death (192 [36%] of 528 patients who died with available data). In mixed-Cox analyses, age of 60 years or older, use of inotropes and vasopressors before ECMO initiation, chronic renal failure, and time from intubation to ECMO initiation of 4 days or more were associated with higher in-hospital mortality. 613 patients did not die in hospital, and 547 (95%) of 577 patients for whom data were available were alive at 6 months. 102 (24%) of 431 patients had returned to full-time work at 6 months, and 57 (13%) of 428 patients had returned to part-time work. At 6 months, respiratory rehabilitation was required in 88 (17%) of 522 patients with available data, and the most common residual symptoms included dyspnoea (185 [35%] of 523 patients) and cardiac (52 [10%] of 514 patients) or neurocognitive (66 [13%] of 512 patients) symptoms.
Interpretation
Patient's age, timing of cannulation (<4 days *vs* ≥4 days from intubation), and use of inotropes and vasopressors are essential factors to consider when analysing the outcomes of patients receiving ECMO for COVID-19. Despite post-discharge survival being favourable, persisting long-term symptoms suggest that dedicated post-ECMO follow-up programmes are required.

Lancet Respir Med. 2023 Feb;11(2):151-162.

2025

### In-hospital outcomes and 6-month follow-up results of patients supported with extracorporeal membrane oxygenation for COVID-19 from the second wave to the end of the pandemic (EuroECMO-COVID): a prospective, international, multicentre, observational study.

Background: Extracorporeal membrane oxygenation (ECMO) for COVID-19 was thoroughly assessed during the first pandemic wave, but data on subsequent waves are limited. We aimed to investigate in-hospital and 6-month survival of patients with COVID-19 supported with ECMO from the second pandemic wave (Sept 15, 2020) until the end of the pandemic (March 21, 2023, announced by WHO).
Methods: EuroECMO-COVID is a prospective, observational study including adults (aged ≥16 years) requiring ECMO respiratory support for COVID-19 from 98 centres in 21 countries. We compared patient characteristics and outcomes between in-hospital survivors and non-survivors. Mixed-effects multivariable logistic regressions were used to investigate factors linked to in-hospital mortality. 6-month survival and overall patient status were determined via patient contact or chart review. This study is registered with ClinicalTrials.gov, NCT04366921, and is complete.
Findings: We included 3860 patients (2687 [69·7%] were male and 1169 [30·3%] were female; median age 51 years [SD 11]) from 98 centres in 21 countries. In-hospital mortality was 55·9% (n=2158), with 81·2% (n=1752) deaths occurring during ECMO support. More non-survivors had diabetes, hypertension, cardiovascular disease, and renal failure, and required more pre-ECMO inotropes and vasopressors compared with survivors. Median support duration was 18 days (IQR 10-31) for both groups. Factors linked to in-hospital mortality included older age, pre-ECMO renal failure, pre-ECMO vasopressors use, longer time from intubation to ECMO initiation, and complications, including neurological events, sepsis, bowel ischaemia, renal failure, and bleeding. Of the 1702 (44·1%) in-hospital survivors, 99·7% (n=1697) were alive at 6 months follow-up. Many patients at 6 months follow-up had dyspnoea (501 [32·0%] of 1568 patients), cardiac (122 [7·8%] of 1568 patients), or neurocognitive (168 [10·7%] of 1567 patients) symptoms.
Interpretation: Our data for patients undergoing ECMO support for respiratory distress from the second COVID-19 wave onwards confirmed most findings from the first wave regarding patient characteristics and factors correlated to in-hospital mortality. Nevertheless, in-hospital mortality was higher than during the initial pandemic wave while 6-month post-discharge survival remained favourable (99·7%). Persisting post-discharge symptoms confirmed the need for post-ECMO patient follow-up programmes.

De Piero ME et Al. Lancet Respir Med. 2025 Apr;13(4):307-317

**Autori**: De Piero ME, Mariani S, van Bussel BCT, et Al.; EuroECMO-COVID Study Group | **Nome della pubblicazione**: The Lancet (Respiratory Medicine) | **Volume, numero, pagine**: 2025 Apr;13(4):307-317 | **Editore**: Elsevier

2025

### Complex Hybrid Cardiac Surgery - Invasive Cardiology Procedures: Over 80 Years Old Left Atrial Mixoma Case Report

With increase in life expectancy and improvement of quality of life, the need for proper management and life-extension measures together with appropriate medical procedures arises.
This case report shows how effective and successful can be even a complex invasive procedure in the life of a geriatric patient and the multidisciplinary approach to cardiac pathology in a elderly patient with comorbidities.
This case report discusses a geriatric patient over 80 years old with a voluminous left atrial mixoma who underwent complex cardiac surgery - invasive cardiology procedures. The procedures consisted of removal of the large myxoma, replacement of mitral valve with biological prosthesis and PTCA for coronary occlusion.

J Clin Res Case Stud, 2025; 3 (3).

**Autori**: Enrico Ramoni, Domenico Sarandria, Michele Mita, Roberto Di Bartolomeo and Nicola Sarandria | **Nome della pubblicazione**: Journal of Clinical Research and Case Studies | **Volume, numero, pagine**: Volume 3, Issue 3. | **Editore**: OASK Publishers

## PATENTE DI GUIDA

**Patente di guida:** B

## CONFERENZE E SEMINARI

### Conferences

27/10/2018 – 27/10/2018 Maria Cecilia Hospital. Cotignola.

**Focus on: l'insufficienza valvolare mitralica: aspetti clinici, diagnostici e terapeutici tra presente e futuro.**

**Link** https://www.gvmnet.it/formazione/formazione-ecm/i-congressi/focus-on-l-insufficienza-valvolare-mitralica

11/11/2019 – 12/11/2019 Bologna
### Tenth postgraduate course "Surgery of the thoracic aorta"

**Link** https://www.noemacongressi.it/archivio-eventi-passati/surgery-of-the-thoracic-aorta-2/

15/02/2020 – 16/02/2020 Abu Dhabi
### The heart valve society's 6th annual meeting

**Link** https://www.hvs2020.com/

18/06/2021 – 20/06/2021 Warsaw, Poland
### 2021 International Society for Minimally Invasive Cardiothoracic Surgery (ISMICS)

**Link** https://meetings.ismics.org/abstracts/2021/Cardiac-Track.cgi

13/10/2021 – 16/10/2021 Barcellona, Spain
### 35th EACTS Annual Meeting

35th Annual Meeting of the European Association of Cardiovascular and Thoracic Surgery.

25/09/2021 – 25/09/2021 Bologna
### LA CHIRURGIA AORTICA BOLOGNESE OGGI: TRIBUTO AL MAESTRO – LE SINDROMI AORTICHE ACUTE

**Link** https://www.noemacongressi.it/archivio-eventi-passati/la-chirurgia-aortica-bolognese-oggi-tributo-al-maestro-le-sindromi-aortiche-acute/#1595945527158-f697f74f-87af

19/05/2022 – 21/05/2022 Rimini, Italy
### 53° Congresso Nazione dell'Associazione Nazionale dei Medici Cardiologi Ospedalieri (ANMCO)

**Link** https://anmco.it/pages/formazione/congresso-nazionale/atti/atti-2022

12/09/2022 – 13/09/2022 Palazzo della Cultura e dei Congressi Bologna, Italy
### 1st Bologna Heart Surgery Symposium

Focus on aortic disease.

**Link** https://bhss2022.noemacongressi.it/

18/04/2023 Cotignola (RA)
### Nuove frontiere nel trattamento dell'insufficienza valvolare mitralica

10/11/2022 – 12/11/2022 Roma, Italy
### SICCH 2022 XXXI Congresso della Società Italiana di Chirurgia Cardiaca

31° National Meeting della Società Italiana di Chirurgia Cardiaca.

**Link** https://sicch.it/congresso-sicch-2022/

22/09/2023 – 23/09/2023 Bologna, Italy
### 2nd Bologna Heart Surgery Symposium

Focus on heart failure

**Link** https://bhss2023.noemacongressi.it/

20/06/2024 – 21/06/2024 Bari, Italy
### MICS 2024 - Minimally Invasive and Catheter Solutions

MICS è un meeting di due giornate con focus sulle più recenti novità della chirurgia transcatetere mininvasiva della valvola mitrale, aortica, della tricuspide e della fibrillazione atriale.

**Link** https://mics.mitralacademy.it/it-IT/MICS2024

28/02/2025 – 28/02/2025 Cotignola (RA)
### AORTIC MICS FOCUS ON: La patologia dell'aorta toracica

La patologia dell'aorta toracica, spesso asintomatica e a lungo silente, rappresenta uno dei temi cardiochirurgici più interessanti e "senza tempo". È un argomento trasversale, di particolare interesse per cardiologi, cardiochirurghi, radiologi e anestesisti. L'obiettivo dell'Aortic MICS è di ripercorrere il work-up diagnostico per il corretto inquadramento della patologia, ponendo particolare attenzione alle ultime linee Guida del 2024. Verranno inoltre sviscerate le patologie dei vari tratti dell'aorta e i rispettivi trattamenti chirurgici e interventistici.

**Link** https://mics.mitralacademy.it/it-IT/corsi/aortic_mics

13/02/2025 – 14/02/2025 Rome
### MIND THE AORTA 2025

Pioneering the Future: Conforming Aortic Surgery to the Gold Standard.

**Link** https://www.mindtheaorta.com/2025

20/05/2024 Vicenza
### MITRAL 4D DAY: one ring to run them all

Write here the description...

## JOB-RELATED SKILLS

ATTUALE
### Casistica chirurgica

Da quando ha intrapreso l'attività di cardiochirurgo, è stato primo aiuto in più di 8000 interventi sia di cardiochirurgia tradizionale che mini-invasiva.
Come primo operatore esegue routinariamente tutte le principali tipologie di interventi cardiochirurgici dell'adulto: bypass coronarici con multipli condotti arteriosi; sostituzione e plastica valvolare aortica preferenzialmente con approccio mini-invasivo (ministenotomia superiore o minitoracotomia); sostituzione e plastica valvolare mitralica preferenzialmente con approccio mini-invasivo (minitoracotomia destra e video-toracoscopia); interventi multi-valvolari; interventi cominati valvolari-coronarici; sostituzione della radice aortica mediante tecnica di Bentall; sostituzione del bulbo aortico con risparmio della valvola aortica mediante tecnica di David; chiusura dei difetti inter-atriali mediante approccio mini-invasivo in minitoracotomia destra; reinterventi.
Come primo operatore ha eseguito più di 800.

**Link** https://www.youtube.com/watch?v=8dtpZI7rqNw | https://www.youtube.com/watch?v=McCeFCVBfCQ | https://www.youtube.com/watch?v=ApYTsfgIzJw

01/03/2003 – 31/10/2007
### TRAPIANTO CARDIACO E ASSISTENZE CARDIACHE

Durante la scuola di specializzazione presso il Policlinico S. Matteo di Pavia, ha acquisito esperienza nel campo del trapianto cardiaco e di polmone e delle assistenze ventricolari. Ha frequentato il laboratorio di cateterismo cardiaco e biopsia endomiocardica, partecipando alla gestione dei pazienti in lista d'attesa per trapianto cardiaco e nel post-trapianto. Ha preso parte a diversi trapianti d'organi toracici (cuore, polmoni, blocco cuore- polmoni) e a circa 50 espianti di cuore.

ATTUALE
### ECMO

Nel corso della scuola di specializzazine presso l'Universita di Pavia, ha partecipato all'impianto di assistenze cardio-respiratorie ECMO, interessandosi della loro performance durante la successiva degenza ospedaliera.
Ha partecipato al progetto dell'Azienda Ospedaliera di Perugia di resuscitazione cardiopolmonare e trattamento dello shock cardiaco mediante impianto di ECMO periferico, anche al di fuori della sala operatoria cardiochirurgica. Ha personalmente eseguito l'impianto di ECMO in pazienti con shock post-infartuale.
Durante la pandemia da Covid-19, presso l'Istituto Clinico Casalpalocco Roma-3 Covid-19 Hospital, ha personalmente impiantato e gestito gli ECMO veno-venosi per il trattamento della polmonite da Sars-Cov-2.
Attualmente esegue routinarimente l'impianto di ECMO per il trattamento dello shock post-cardiotomico e post-IMA.

### PRELIEVO ENDOSCOPICO DEI CONDOTTI PER BYPASS CORONARICO

Presso l'Ospedale Santa Maria della Misericordia di Perugia, ha sviluppato esperienza nel prelievo endoscopico della vena grande safena e dell'arteria radiale come condotti per gli interventi di bypass coronarico. Ha personalmente eseguito più di 100 procedure con tale tecnica ed è stato responsabile del progetto.
E' stato inoltre "proctor" nazionale della ditta MAQUET per il sistema di prelievo endoscopico VASOVIEW.

ATTUALE

### CHIRURGIA DELL'ARCO AORTICO, AORTA TORACICA E TORACO-ADDOMINALE "OPEN" E IBRIDA

Nel corso dell'esperienza lavorativa presso il centro Città di Lecce Hospital, con il Dott. Giampiero Esposito ha acquisito esperienza nelle tecniche chirurgiche di sostituzione dell'arco aortico, dell'aorta toracica discendente e toraco-addominale sia tradizionali che ibride, che prevedono cioè una prima fase chirurgica (debranching dei tronchi sopra-aortici o dei vasi viscerali) e una successivo step endovascolare.
Attualmente esegue costantemente interventi di sostituzione dell'arco aortico, sia come aiuto che come primo operatore, in collaborazione col Prof. Roberto di Bartolomeo.

01/06/2012 – ATTUALE

### RICOSTRUZIONE CORONARICA

Presso il Centro Maria Beatrice Hospital di Firenze con il Dott. Georges Popoff, ha maturato particolare esperienza nella rivascolarizzazione miocardica con **doppia arteria mammaria** e soprattutto mediante **ricostruzione coronarica.**.
Attualmente esegue routinariamente interventi di endoarteriectomia e ricostruzione coronarica mediante patch di arteria mammaria.

01/03/2003 – ATTUALE

### CARDIOCHIRIRGIA MINI-INVASIVA

Sin dalla scuola di specializzazione presso il Policlino S.Matteo di Pavia, poi passando per le esperienze lavorative presso il Centro Citta di Lecce Hospital e presso il Maria Cecilia Hospital di Cotignola, ha acquisito particolare esperienza con le tecniche di cardiochirurgia **MINI-INVASIVA, in particolare ministernotomia e minitoracotomia destra**.
Attualmente esegue routinariamente gli interventi valvolari utilizzando come approccio la mini-toracotomia (nel caso della chirurgia valvolare aortica) o la minitoracotomia destra in video-toracoscopia (nel caso della chirurgia valvolare mitralica, tricuspidale e dei difetti inter-atriali).

## OTHER SKILLS

### Other skills

Appasionato di vela, sia su derive che cabinati, ha in passato partecipato a diverse competizioni agonistiche sia di livello nazionale che europeo.

## ORGANISATIONAL SKILLS

01/02/2008 – 30/04/2010

### Responsabile del progetto di prelievo endoscopico della vena grande safena e dell'arteria radiale per gli interventi di bypass coronarico

Durante l'esperienza lavorativa presso la SC di Cardiochirurgia dell'Azienda Ospedaliera di Perugia, è stato responsabile del progetto di prelievo endoscopico della vena grande safena e dell'arteria radiale per gli interventi di bypass coronarico. Ha personalmente eseguito più di 100 prelievi endoscopici di vena grande safena e di arteria radiale.

01/02/2008 – 30/04/2010

### Proctor italiano per la ditta Maquet Cardiovascular LLC, per l'utilizzo del sistema Vasoview di prelievo endoscopico della vena grande safena e dell'arteria radiale per interventi di bypass coronarico

E' stato "proctor" italiano per conto della ditta Maquet Cardiovascular LLC (Maquet Italia S.p.A., Cinisello Balsamo Milano) per l'utilizzo del sistema Vasoview per il prelievo endoscopico della vena grande safena e dell'arteria radiale per interventi di bypass coronarico. Tale incarico prevedeva sia l'iniziazione e l'affiancamento di cardiochirurghi presso altri centri italiani, sia il training delle equipe esterne nella tecnica di prelievo e nell'utilizzo delle più avanzate tecnologie, presso la cardiochirurgia di Perugia.

01/03/2025 – ATTUALE

### Responsabile della programmazione operatoria della chirurgia cardiaca e vascolare del Villa Torri Hospital