

Il primo Approccio al'Endocardite Infettiva è solo Chirurgico?

17° Meeting



CardioLucca

Heart Brings Heart 2023

Lucca, 22-24 Giugno 2023

Centro Congressi Auditorium San Francesco

Pier Luigi Stefàno
Cardiochirurgia AOU Firenze



Prof. Pierluigi Stefàno Cardiochirurgia Università di

openheart Escalating incidence of infective endocarditis in Europe in the 21st century

Khawaja M Talha ¹, Larry M Baddour, ^{1,2} Martin H Thornhill, ³ Verda Arshad, ¹ Wajeeha Tariq, ¹ Imad M Tleyjeh, ^{4,5} Christopher G Scott, ⁶ Meredith C Hyun, ⁶ Kent R Bailey, ⁶ Nandan S Anavekar, ² Raj Palraj, ¹ M Rizwan Sohail, ^{1,7} Daniel C DeSimone, ^{1,2} Mark J Dayer ⁸

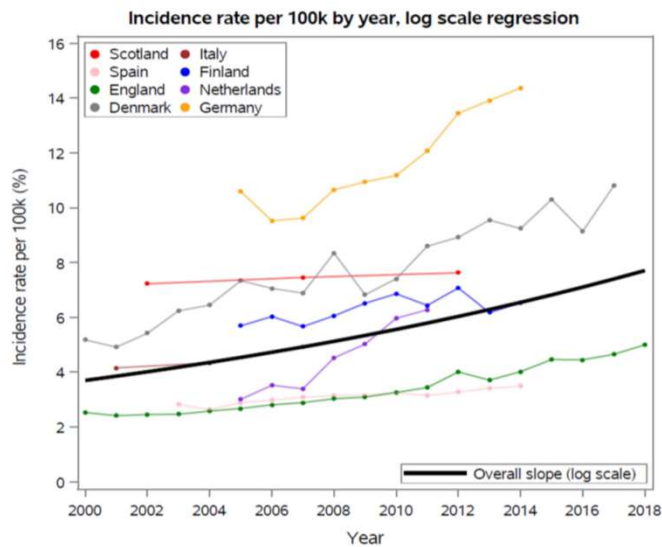


Figure 4 Individual and pooled incidence rate per 100000/year, log scale regression. The y-axis denotes incidence rate per 100000 (%), while the x-axis denotes years 2000–2018.

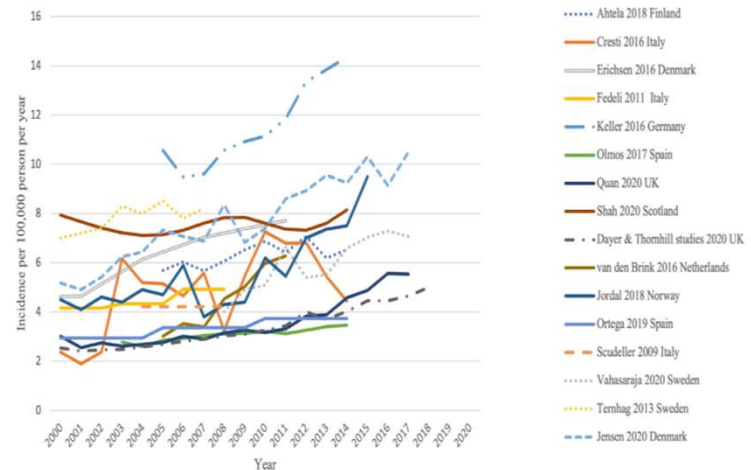


Figure 3 Temporal trends of crude incidence of IE across all studies from 2000 to 2020. The y-axis denotes number of cases per 100000 people while the x-axis denotes years 2000–2020. IE, infective endocarditis.

Conclusion: Based on findings from our systematic review, **IE incidence in Europe has doubled over the past two decades** in Europe. Multiple factors are likely responsible for this striking increase.



Predictors of poor outcome in patients with infective endocarditis

2015 ESC Guidelines for the management of infective endocarditis

Patient characteristics

- Older age
- Prosthetic valve IE
- Diabetes mellitus
- Comorbidity (e.g., frailty, immunosuppression, renal or pulmonary disease)

Clinical complications of IE

- Heart failure
- Renal failure
- >Moderate area of ischaemic stroke
- Brain haemorrhage
- Septic shock

Microorganism






- *Staphylococcus aureus*
- Fungi
- Non-HACEK Gram-negative bacilli

Echocardiographic findings

- Periannular complications
- Severe left-sided valve regurgitation
- Low left ventricular ejection fraction
- Pulmonary hypertension
- Large vegetations
- Severe prosthetic valve dysfunction
- Premature mitral valve closure and other signs of elevated diastolic pressures



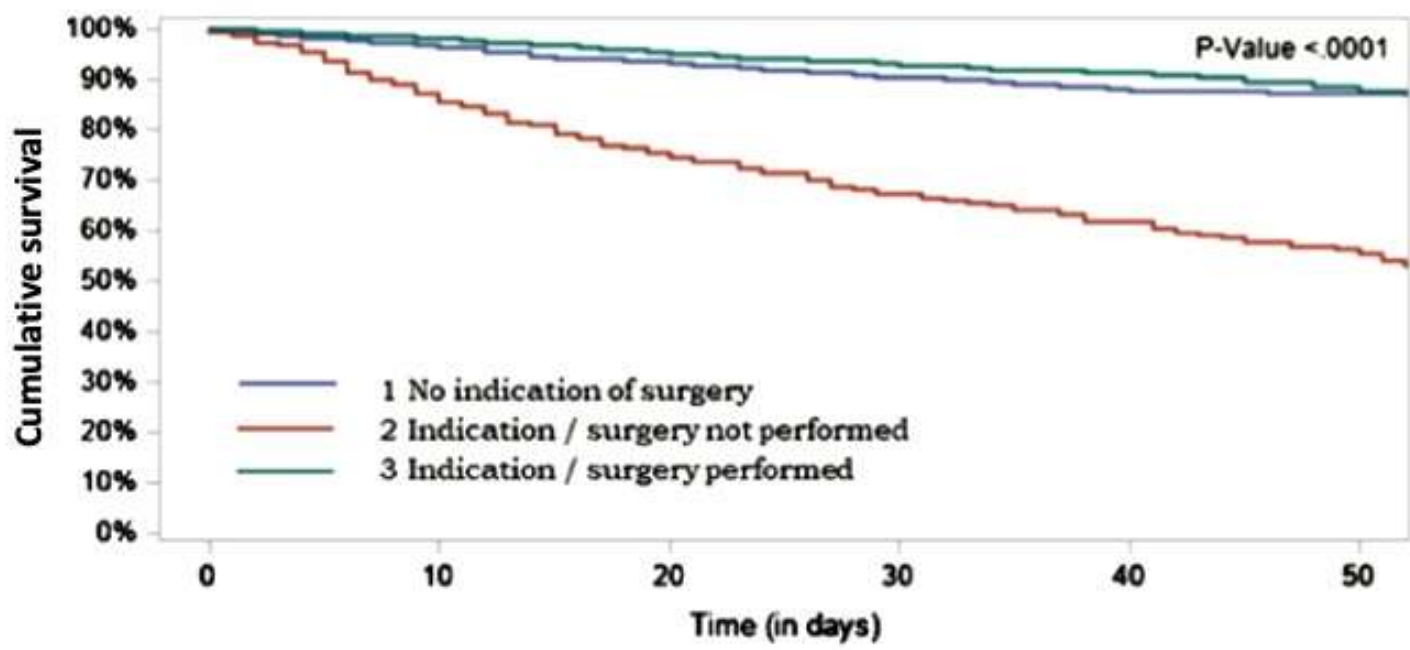
Clinical presentation, aetiology and outcome of infective endocarditis. Results of the ESC-EORP EURO-ENDO (European infective endocarditis) registry: a prospective cohort study

Gilbert Habib ^{1,2*}, Paola Anna Erba ^{3,4}, Bernard Lung ⁵, Erwan Donal⁶, Bernard Cosyns ⁷, Cécile Laroche⁸, Bogdan A. Popescu⁹, Bernard Prendergast¹⁰, Pilar Tornos¹¹, Anita Sadeghpour¹², Leopold Oliver¹³, Jolanta-Justina Vaskelyte¹⁴, Rouguiatou Sow ¹⁵, Olivier Axler¹⁶, Aldo P. Maggioni¹⁷, and Patrizio Lancellotti^{18,19,20}; on behalf of the EURO-ENDO Investigators[†]

Prospective cohort of 3116 adult patients admitted to 156 hospitals in 40 countries between January 2016 and March 2018 with a diagnosis of IE based on ESC 2015 diagnostic criteria.

Following ESC guidelines, theoretical indication for cardiac surgery was present in 2160 (69.3%) patients but performed in only 1596





Number of Subjects at risk for event

	0	10	20	30	40	50
1	955	850	678	506	338	188
2	564	469	350	257	180	102
3	1596	1501	1306	1038	774	495



2015 ESC Guidelines for the management of infective endocarditis

The Task Force for the Management of Infective Endocarditis of the European Society of Cardiology (ESC)

CLINICAL PRACTICE GUIDELINE: FULL TEXT

2020 ACC/AHA Guideline for the Management of Patients With Valvular Heart Disease

A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines



Table 22 Indications and timing of surgery in left-sided valve infective endocarditis (native valve endocarditis and prosthetic valve endocarditis)

Indications for surgery	Timing ^a	Class ^b	Level ^c	Ref. ^d
1. Heart failure				
Aortic or mitral NVE or PVE with severe acute regurgitation, obstruction or fistula causing refractory pulmonary oedema or cardiogenic shock	Emergency	I	B	111,115, 213,216
Aortic or mitral NVE or PVE with severe regurgitation or obstruction causing symptoms of HF or echocardiographic signs of poor haemodynamic tolerance	Urgent	I	B	37,115, 209,216, 220,221
2. Uncontrolled infection				
Locally uncontrolled infection (abscess, false aneurysm, fistula, enlarging vegetation)	Urgent	I	B	37,209, 216
Infection caused by fungi or multiresistant organisms	Urgent/ elective	I	C	
Persisting positive blood cultures despite appropriate antibiotic therapy and adequate control of septic metastatic foci	Urgent	IIa	B	123
PVE caused by staphylococci or non-HACEK gram-negative bacteria	Urgent/ elective	IIa	C	
3. Prevention of embolism				
Aortic or mitral NVE or PVE with persistent vegetations <u>> 10 mm after one or more embolic episode despite appropriate antibiotic therapy</u>	Urgent	I	B	9,58,72, 113,222
Aortic or mitral NVE with vegetations > 10 mm, associated with severe valve stenosis or regurgitation, and low operative risk	Urgent	IIa	B	9
Aortic or mitral NVE or PVE with isolated very large vegetations (> 30 mm)	Urgent	IIa	B	113
Aortic or mitral NVE or PVE with isolated large vegetations (> 15 mm) and no other indication for surgery ^e	Urgent	IIb	C	



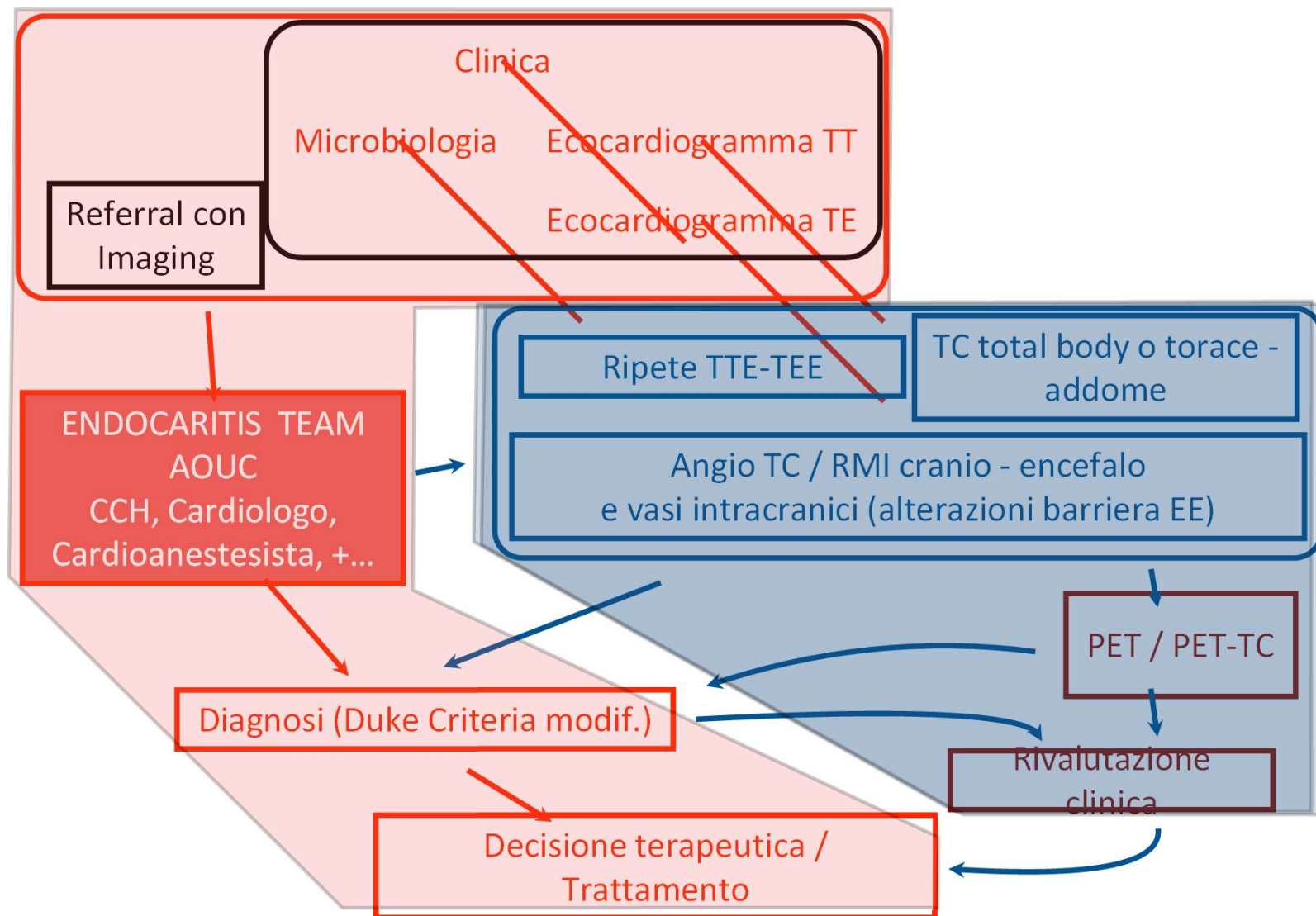
Endocarditis Team

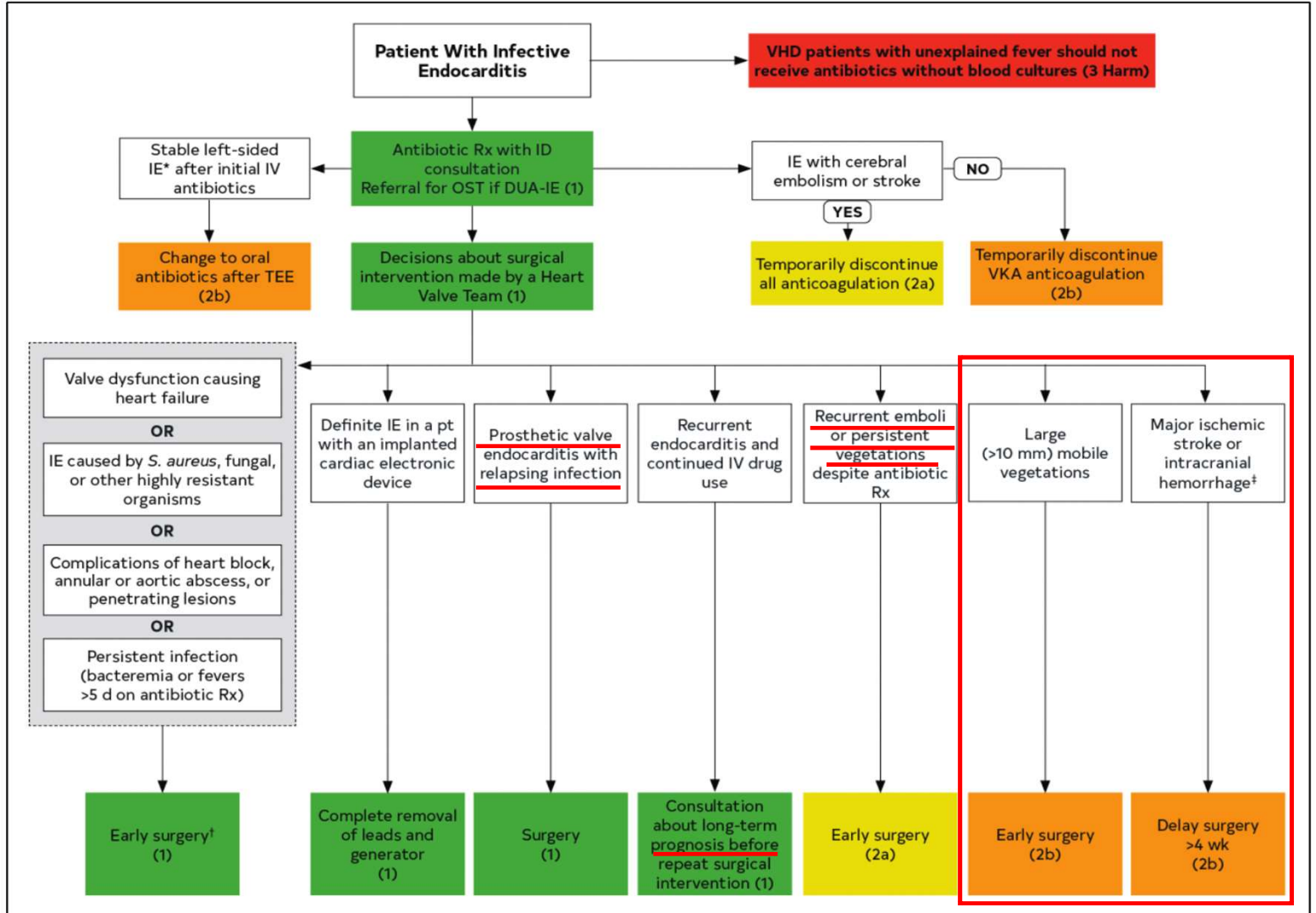
Table 9 Recommendations for referring patients to the reference centre

Recommendations	Class ^a	Level ^b	Ref. ^c
Patients with complicated IE should be evaluated and managed at an early stage in a reference centre, with immediate surgical facilities and the presence of a multidisciplinary 'Endocarditis Team', including an ID specialist, a microbiologist, a cardiologist, imaging specialists, a cardiac surgeon and, if needed, a specialist in CHD	IIa	B	12,56
For patients with uncomplicated IE managed in a non-reference centre, early and regular communication with the reference centre and, when needed, visits to the reference centre should be made	IIa	B	12,56



Workout diagnostico





Endocardite non complicata: terapia medica

Endocardite complicata: chirurgia

Challenges:

Indicazione chirurgica in paziente ad alto rischio

Indicazione chirurgica con classe IIb

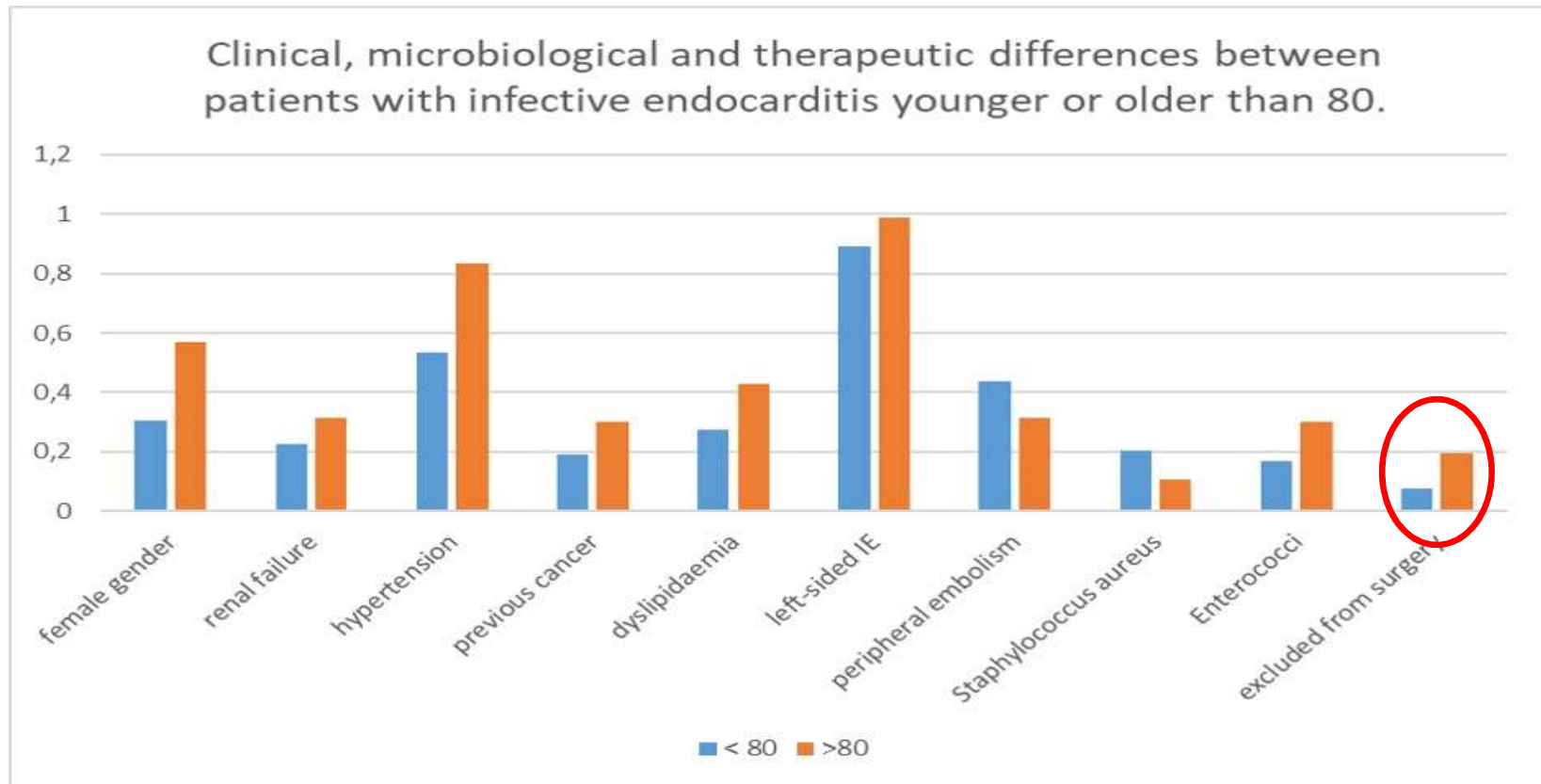
Nessuna indicazione

- Anziani fragili
- Complicanze neurologiche
- Vegetazioni > 1 cm senza altre indicazioni
- Infezioni su protesi da germi considerati a basso rischio

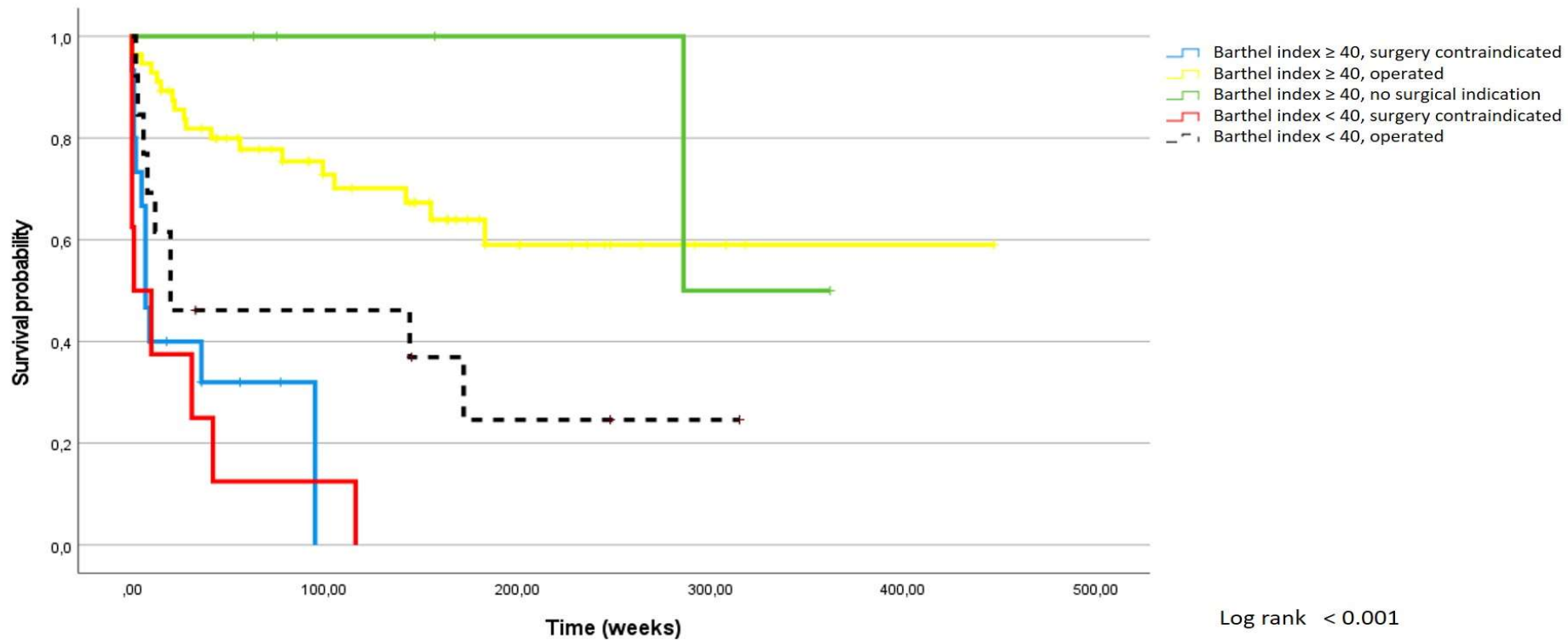


Pazienti Anziani con Endocardite Infettiva

Infective endocarditis in octogenarians: a retrospective study in a single surgical center
 European Heart Journal Cardiovascular Imaging · February 2022



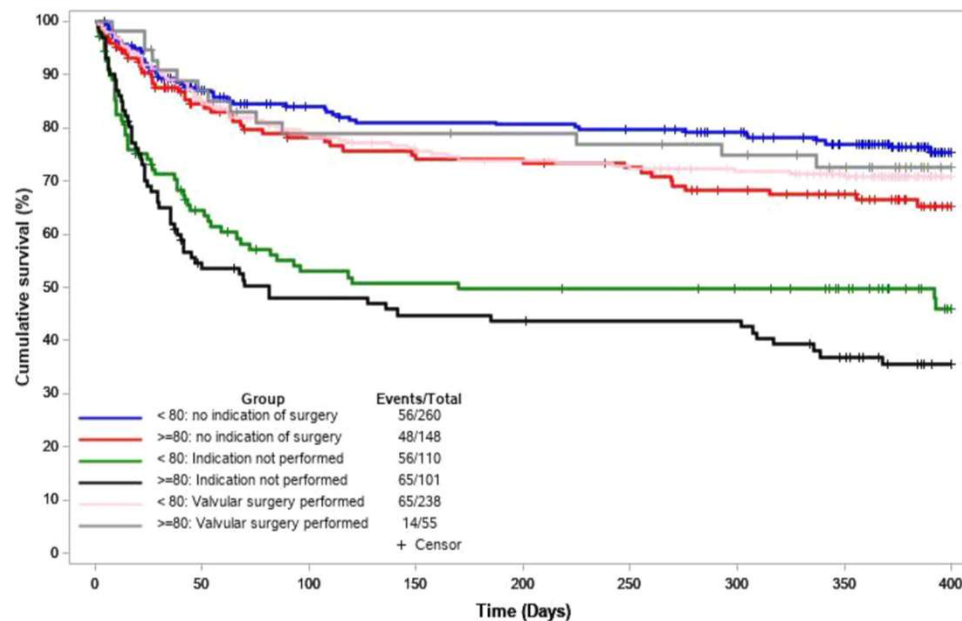
Pazienti Anziani con Endocardite Infettiva



Surgery and outcome of infective endocarditis in octogenarians: prospective data from the ESC EORP EURO-ENDO registry

Michal Pazdernik^{1,2} · Bernard Lung³ · Bulent Mutlu⁴ · François Alla⁵ · Robert Riezebos⁶ · William Kong⁷ · Maria Carmo Pereira Nunes⁸ · Luc Pierard⁹ · Ilija Srdanovic¹⁰ · Hirotugu Yamada¹¹ · Andrea De Martino¹² · Marcelo Haertel Miglioranza¹³ · Julien Magne¹⁴ · Cornelia Piper¹⁵ · Cécile Laroche¹⁶ · Aldo P. Maggioni^{16,17} · Patrizio Lancellotti¹⁸ · Gilbert Habib^{19,20} · Christine Selton-Suty^{21,22} on behalf of the EURO-ENDO Investigators group

Infection (2022) 50:1191–1202

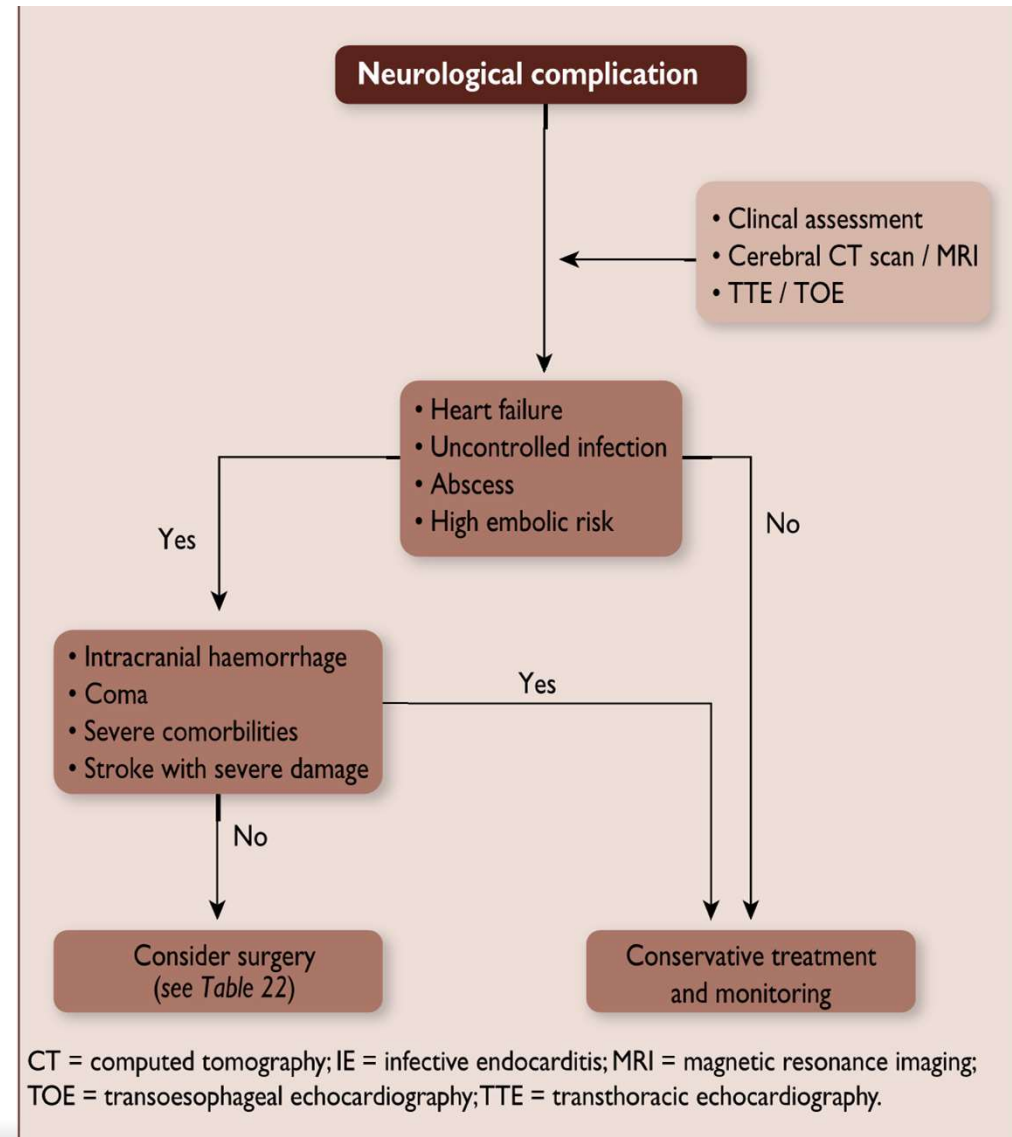


Conclusion Although mortality rates are consistently higher in ≥ 80 yo patients than in < 80 yo patients in the general population, mortality of surgery in ≥ 80 yo is similar to < 80 yo after matching patients. **These results confirm the importance of a better recognition of surgical indication and of an increased performance of surgery in ≥ 80 yo patients.**



2015 ESC Guidelines for the management of infective endocarditis

Therapeutic strategies for patients with infective endocarditis and neurological complications.



Pazienti con complicanze neurologiche da endocardite infettiva

RESEARCH

Open Access



Impact of septic cerebral embolism on prognosis and therapeutic strategies of infective endocarditis: a retrospective study in a surgical centre

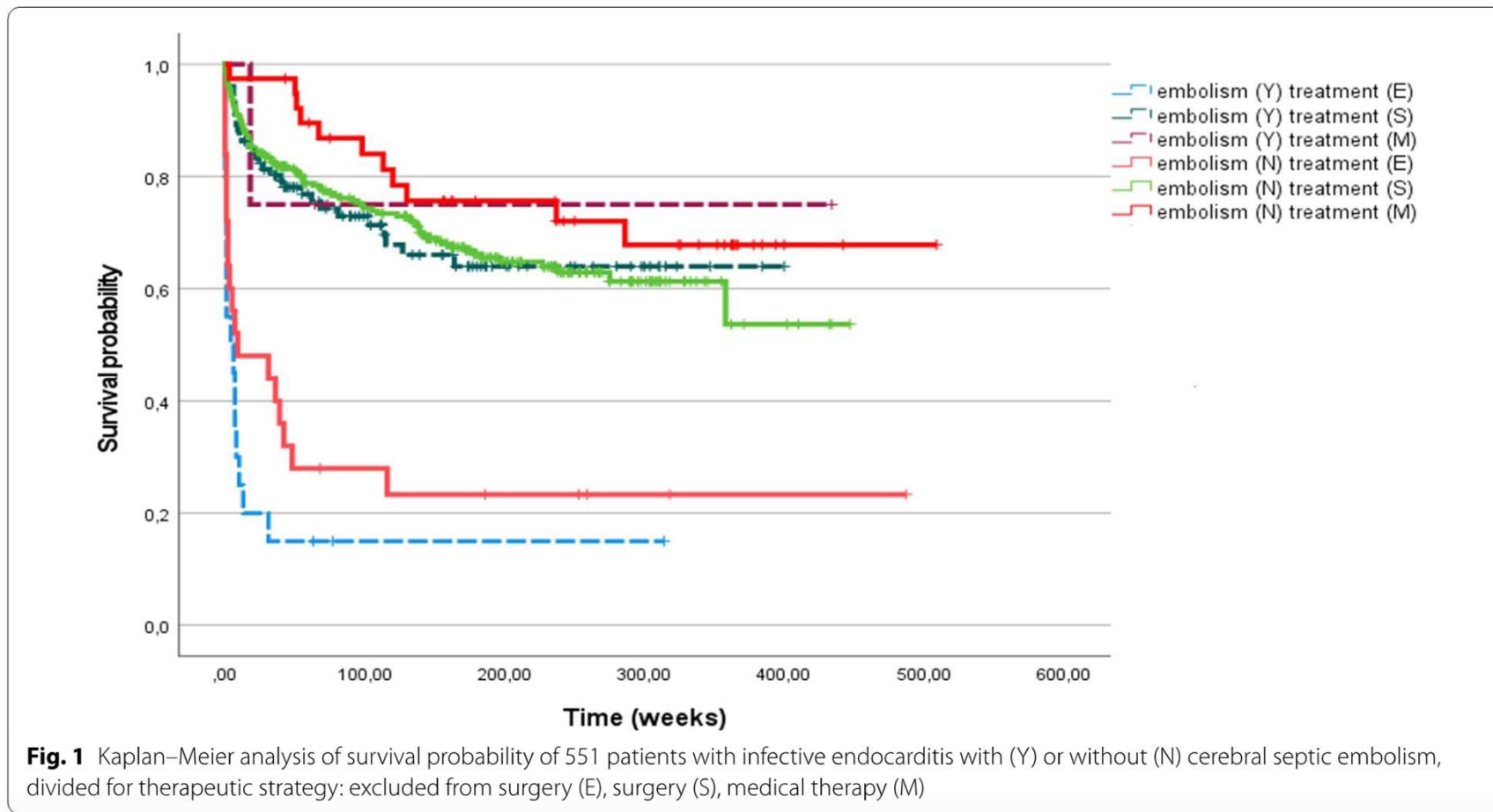
Valentina Scheggi^{1,5*} , Silvia Menale^{2,5}, Barbara Tonietti⁶, Costanza Bigiarini^{1,5}, Jacopo Giovacchini^{2,5}, Stefano Del Pace^{2,5}, Nicola Zoppetti⁴, Bruno Alterini^{1,5}, Pier Luigi Stefàno^{3,5} and Niccolò Marchionni^{2,5}

BMC Infectious Diseases (2022) 22:554

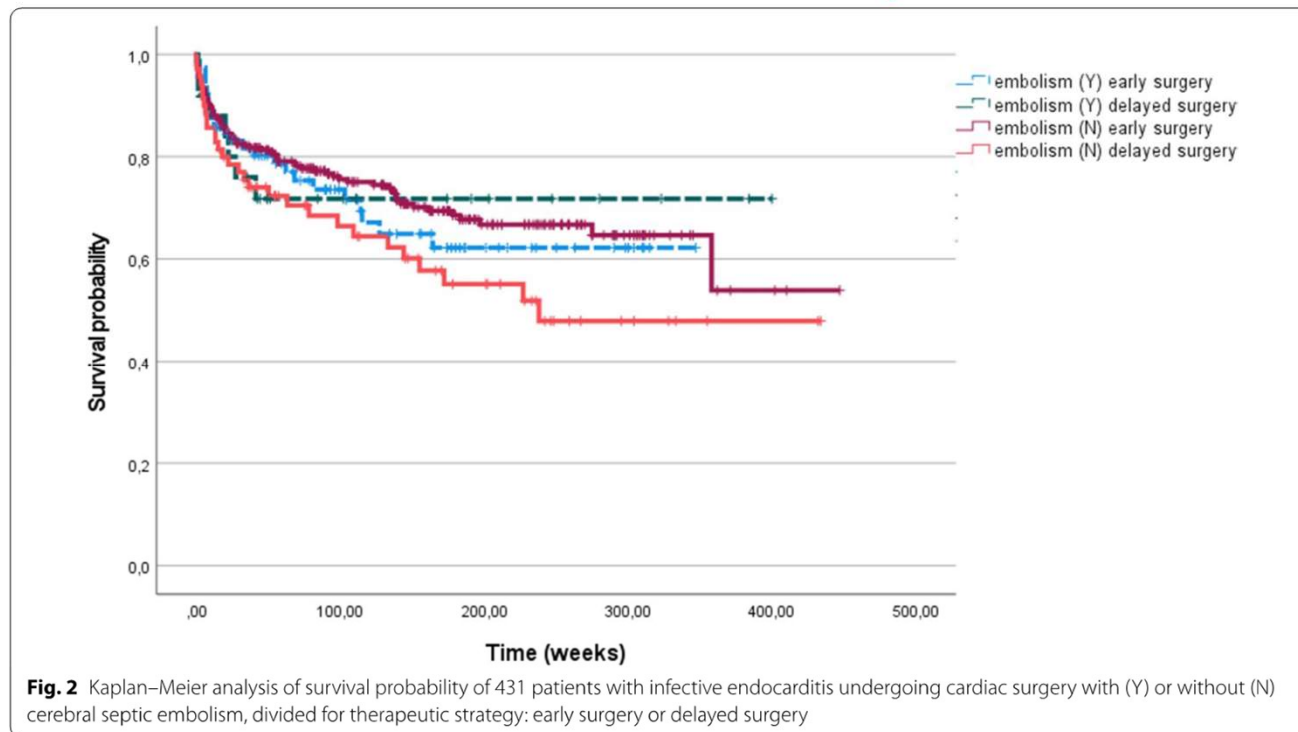


Prof. Pierluigi Stefàno *Cardiochirurgia Università di*

Pazienti con Complicanze Neurologiche da Endocardite Infettiva



Pazienti con Complicanze Neurologiche da e IE: Timing



Conclusions

In patients with neurologic complications of IE, the primary determinant of prognosis is the functional status after the event. Early surgery is safe for most patients, but an individually tailored program guarantees a similar prognosis for patients who need delayed surgery. → **Prevention risk of re-embolization**



Early Operation in Patients With Mitral Valve Infective Endocarditis and Acute Stroke Is Safe

Mehrdad Ghoreishi, MD, Nate Foster, BS, Chetan Pasrija, MD, Aakash Shah, MD, A. Claire Watkins, MD, Charlie F. Evans, MD, Sam Maghami, MD, Rachael Quinn, PhD, Brody Wehman, MD, Bradley S. Taylor, MD, MPH, Murtaza Y. Dawood, MD, Bartley P. Griffith, MD, and James S. Gammie, MD

Division of Cardiac Surgery, University of Maryland School of Medicine, Baltimore, Maryland

(Ann Thorac Surg 2018;105:69–75)

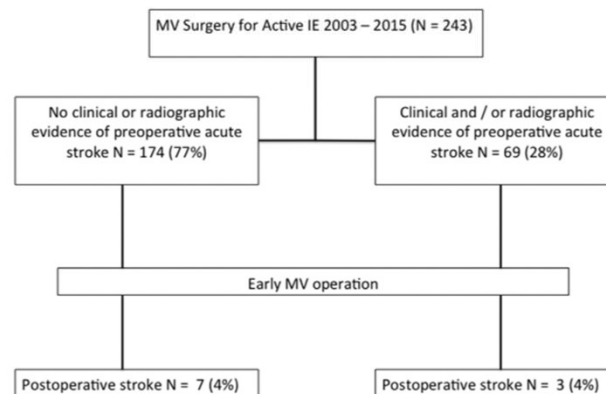


Fig 1. The rate of postoperative new stroke. (IE = infective endocarditis; MV = mitral valve.)

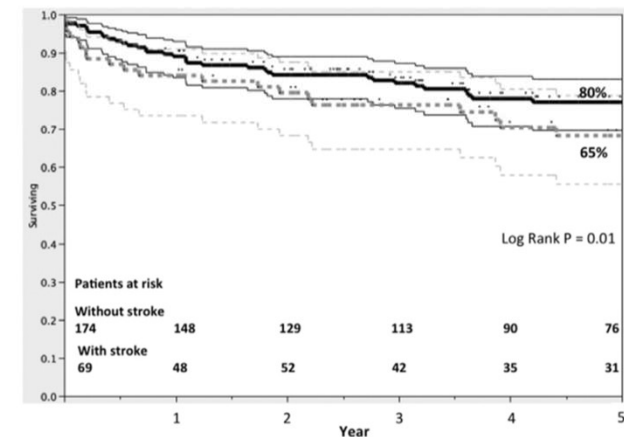


Fig 2. Kaplan-Meier 5-year survival among patients with (dashed line) or without (solid line) preoperative acute stroke.

Conclusion: we found that MV surgery for patients with IE and acute stroke can be performed early with a low risk of postoperative neurologic complications. The likelihood of a postoperative stroke was not increased by the presence of a preoperative stroke. Hemorrhagic conversion of an infarct post-MV surgery is extremely rare.

In most cases where indications for surgery are present, surgical intervention for MV IE complicated by acute stroke should not be delayed.

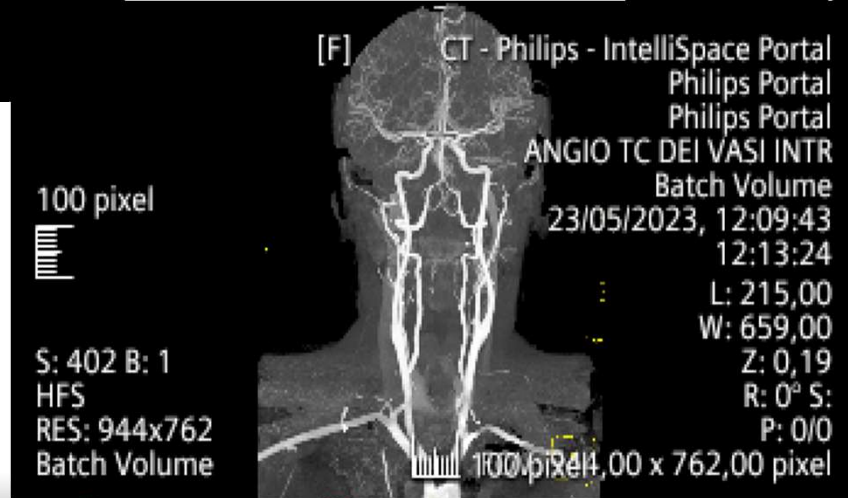
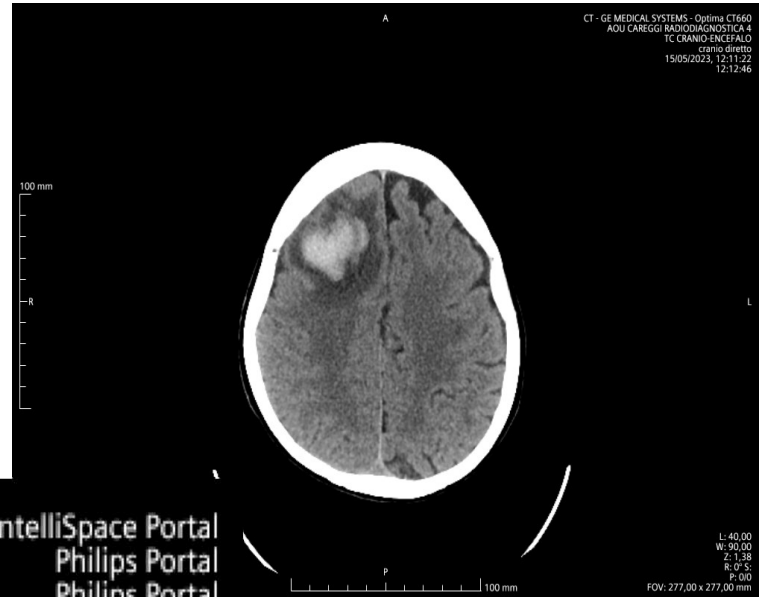


CASO CLINICO

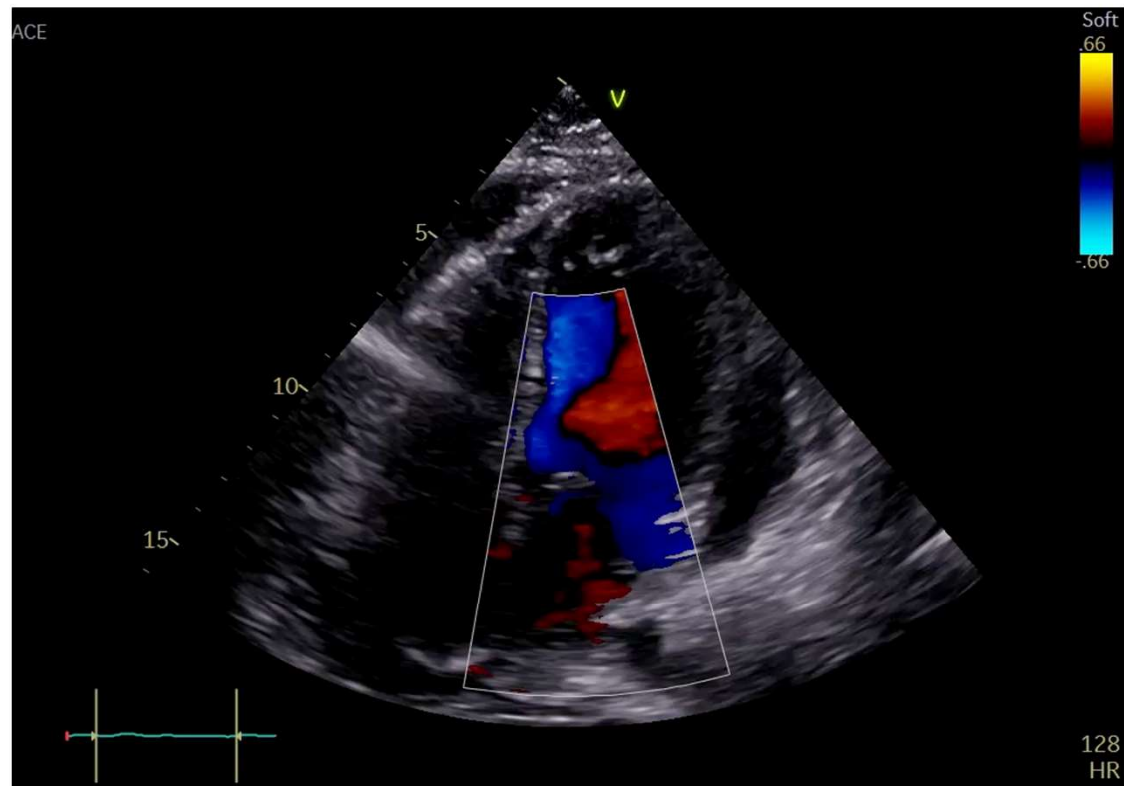
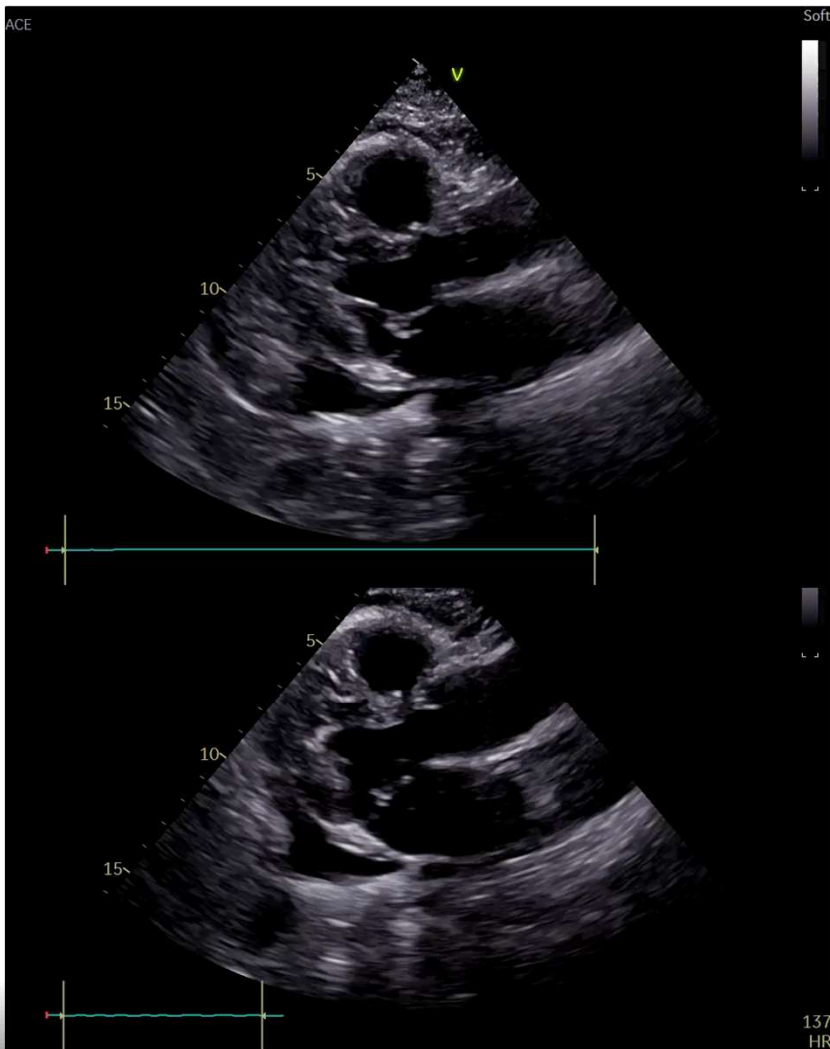
- A.C., 57 year-old woman
- Admitted for fatigue and fever with
- WBC 16000, blood culture + for Enterococcus sp.
- Echocardiography: severe mitral regurgitation (P2 flail), EF 70%, pericardial effusion
- Head CT scan: cerebral embolization with haemorrhage



CASO CLINICO



CASO CLINICO



Consulenze cliniche / Esami strumentali

VISITA DI CONTROLLO NEUROLOGICA

Cartella numero: 824/2023

15/05/2023 09:26 | paziente con ematoma frontale destro l'anticoagulazione ma anche l'antiaggregazione sarebbero controindicata utile anche valutazione neurochirurgica

Consulenze cliniche / Esami strumentali

VISITA NEUROCHIRURGICA

Cartella numero: 824/2023

15/05/2023 16:14 | Visto quadro TC encefalo non utili indicazioni nè a tp antiaggregante.
Possibile EBPM a dose profilattica.



Blocco Operatorio 2001A-2006 - DEAS 1P---NUOVE---SALE OP. 1° PIANO DEAS_NUOVO		Sala Operatoria 12P110 - DEAS 1P SALA 06		
Specialità 1166 - CARDIOCHIRURGIA	Setting Ricovero Ordinario	Data Intervento	Nosologico N°. [REDACTED]	
Cognome	Nome	Sesso F	Data Nascita	Età 56 ANNI

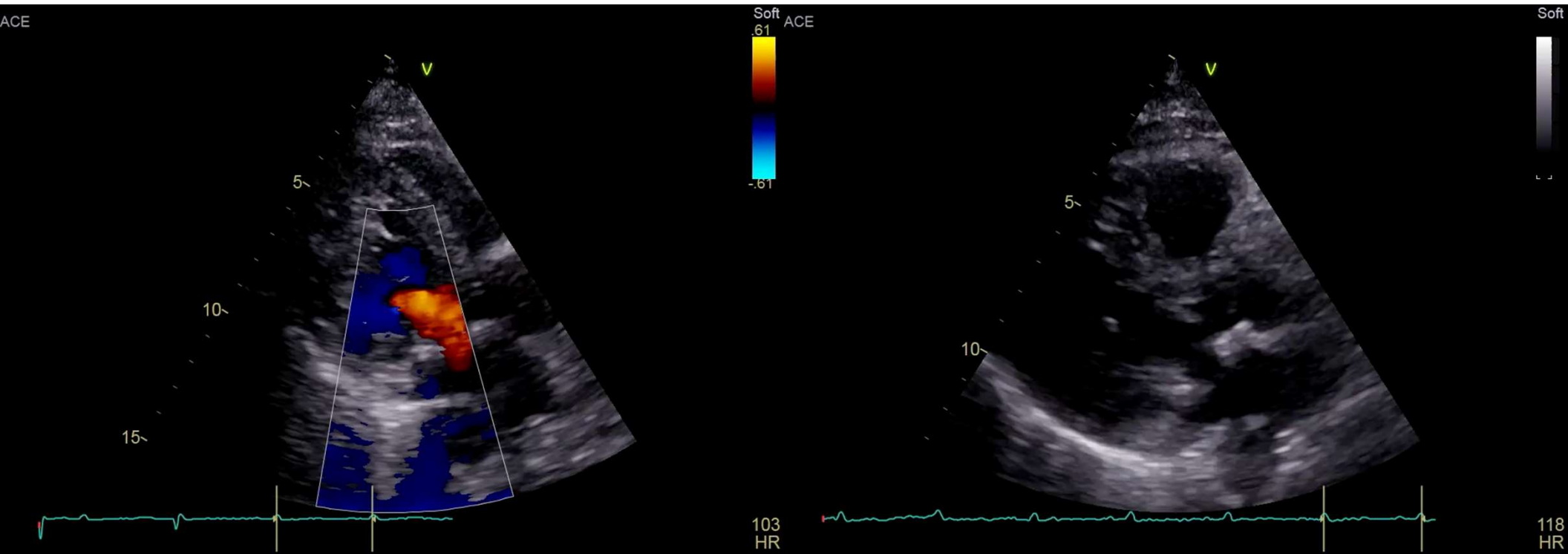
Atto : Diagnosi: Endocardite mitralica con interessamento del LMP e LAM. Flail di P2 2 P1 con Insufficienza mitralica severa

Intervento: Plastica mitralica: Debridement del LAM, resezione triangolare di P2 e P1 ed anuloplastica con anello Corcym m Memo 4 D n.30 in minitoracotomia.

Descrizione intervento: Isolamento dei vasi femorali a destra. Minitoracotomia destra al IV spazio intercostale. Apertura e sospensione del pericardio. Eparinizzazione sistemica. Cannulazione dell'arteria e della vena femorale di destra con tecnica Seldinger in controllo TEE. Inizio CEC. Clampaggio aortico e perfusione di cardioplegia cristalloide ipotermica tipo Del Nido per via anterograda nel bulbo aortico. Atriotomia sinistra. Esposizione della mitrale ed analisi delle lesioni. E' presente flail di P1 e P2 da processo endocarditico sub acuto, interessamento del margine libero del LAM nella zona di contatto. Non evidenze di escavazioni ascessuali ne interessamento dell' anulus. Si esegue plastica mitralica mediante resezione triangolare del segmento di P2 e P1 interssati dal processo endocarditico con rottura cordale, debridement del margine libero del LAM e ricostruzione del lembo posteriore con punti figure of eight in prolene 5/0 . Si impianta anello Corcym Meno 4 D n.30 con punti staccati ad U in ty cron 2/0. Buona continenza della valvola alla prova con acqua. Sutura dell'atriotomia sinistra. Manovre di purga dell' aria. Declampaggio aortico. Svezzamento e sospensione della CEC con buona emodinamica. Protamina, decannulazione, emostasi. Elettrodo ventricolare bipolare. Ricostruzione della parete toracica secondo i piani anatomici su due drenaggi declivi. Ferita inguinale per strati.



ECO Post-Operatorio

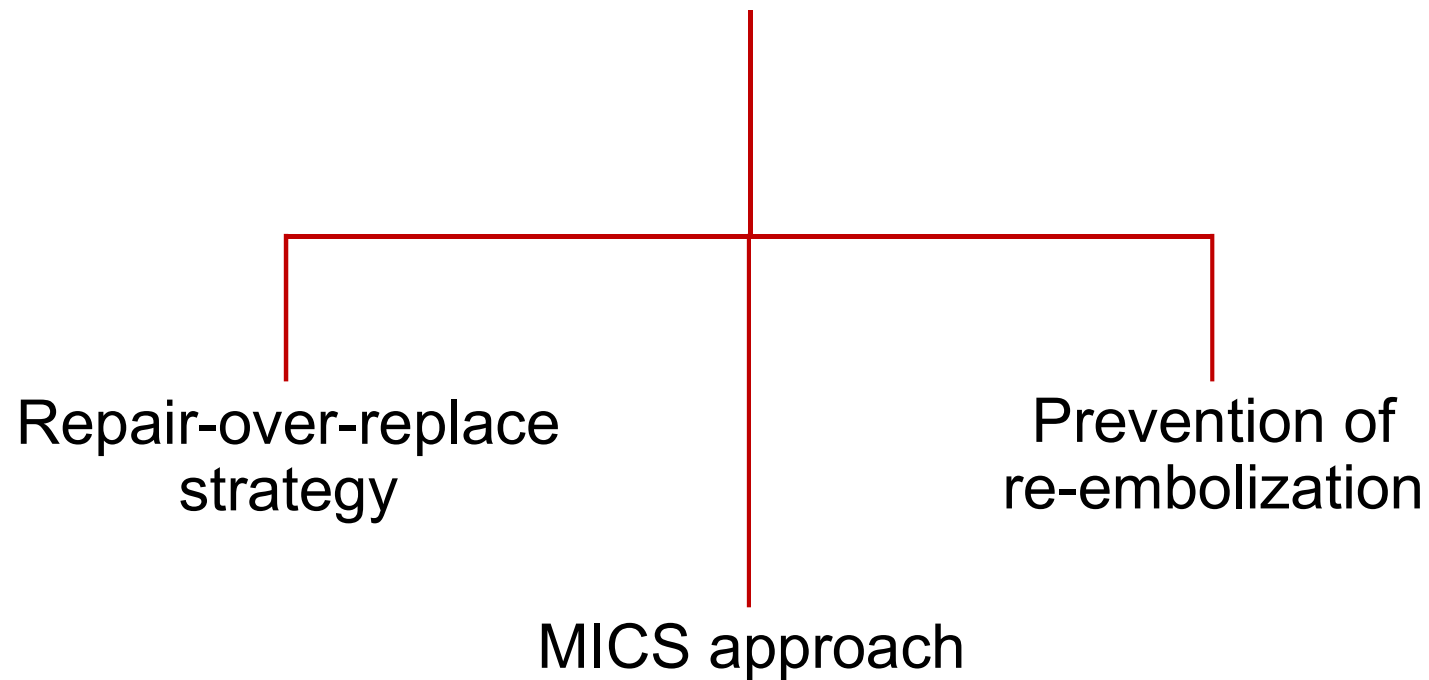


TC POST OPERATORIA



DECISION MAKING

EARLY SURGERY






Pazienti con EI e Vegetazioni di Dimensioni Intermedie in assenza di altre indicazioni chirurgiche

Valvular heart disease

Original research

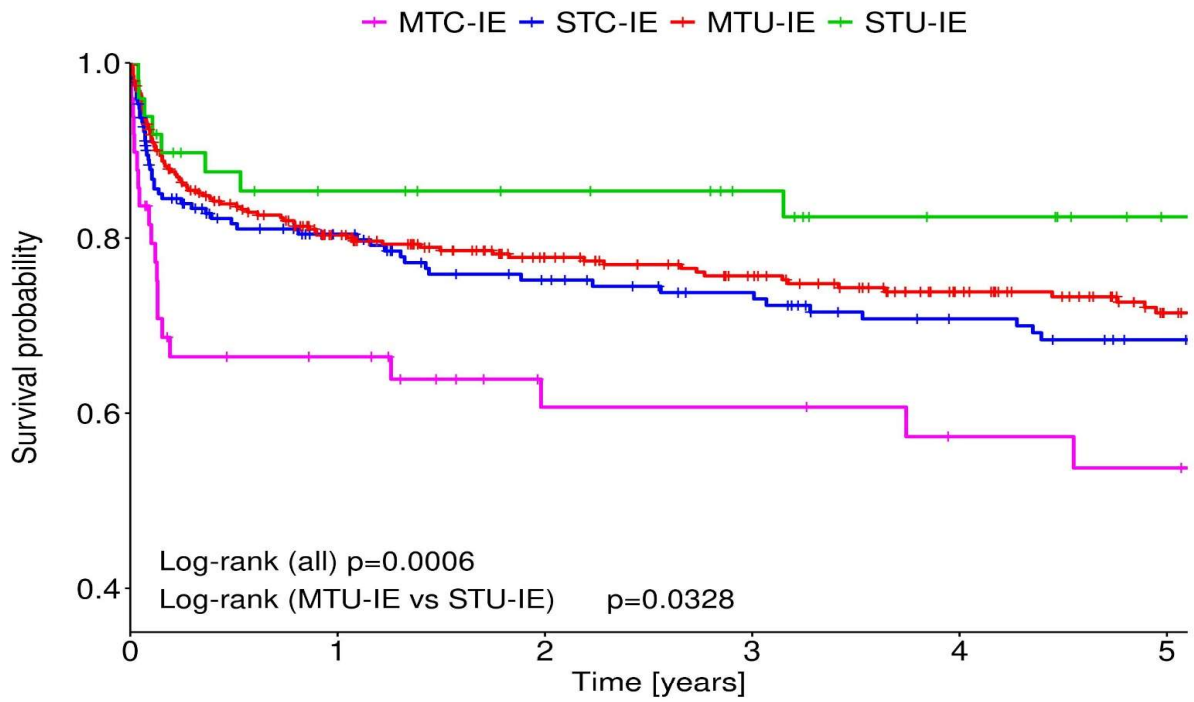
Impact of cardiac surgery on left-sided infective endocarditis with intermediate-length vegetations

Valentina Scheggi ¹, Yohann Bohbot,^{2,3} Christophe Tribouilloy ^{2,3},
Faouzi Trojette,² Chloé Di Lena,⁴ Mary Philip,⁵ Sandrine Hubert,⁶ Silvia Menale,⁷
Nicola Zoppetti,⁸ Stefano Del Pace,⁷ Pier Luigi Stefàno,⁹ Gilbert Habib ¹⁰,
Niccolò Marchionni¹¹

Heart 2023;0:1–6. doi:10.1136/heartjnl-2023-322391



MTC-IE: medical therapy complicated infective endocarditis
STC-IE: surgical therapy complicated infective endocarditis
MTU-IE: medical therapy uncomplicated infective endocarditis
STU-IE: surgical therapy uncomplicated infective endocarditis



Number at risk

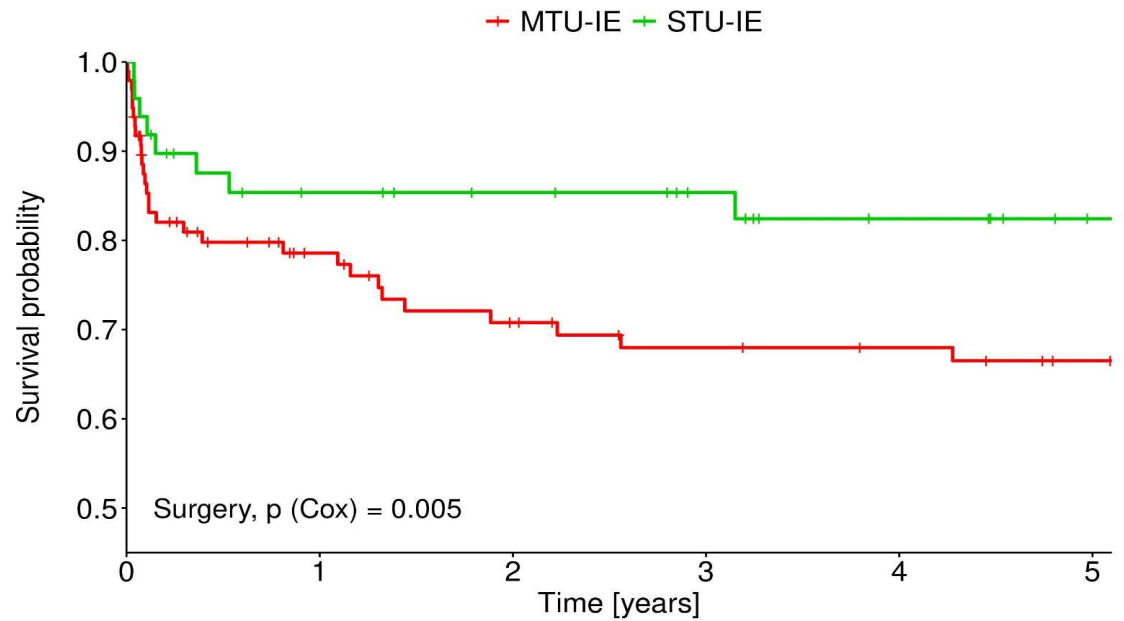
	0	1	2	3	4	5
MTC-IE	49	28	19	19	16	15
STC-IE	193	127	110	101	89	82
MTU-IE	345	235	194	173	142	111
STU-IE	49	36	33	29	24	19



MTU-IE: medical therapy uncomplicated infective endocarditis

STU-IE: surgical therapy uncomplicated infective endocarditis

Repair was feasible in a higher proportion in patients of uncomplicated IE (28.6%) than complicated IE (16.8%) groups treated surgically (p=0.037).



Number at risk

	0	1	2	3	4	5
MTU-IE	97	62	53	48	46	42
STU-IE	49	36	33	29	24	19

Time [years]



Pazienti con endocardite infettiva su protesi valvolare

INTERVENTIONAL CARDIOLOGY AND SURGERY

Prosthetic valve endocarditis: who needs surgery? A multicentre study of 104 cases

G Habib, C Tribouilloy, F Thuny, R Giorgi, A Brahim, M Amazouz, J-P Remadi, G Nadji, J-P Casalta, F Caviaux, J-F Avierinos, X Lescure, A Riberi, P-J Weiller, D Metras, D Raoult

Heart 2005;91:954-959. doi: 10.1136/hrt.2004.046177



ELSEVIER

European Journal of Cardio-thoracic Surgery 38 (2010) 528-538

EUROPEAN JOURNAL OF
CARDIO-THORACIC
SURGERY

www.elsevier.com/locate/ejcts

Surgical treatment for active infective prosthetic valve endocarditis: 22-year single-centre experience[☆]

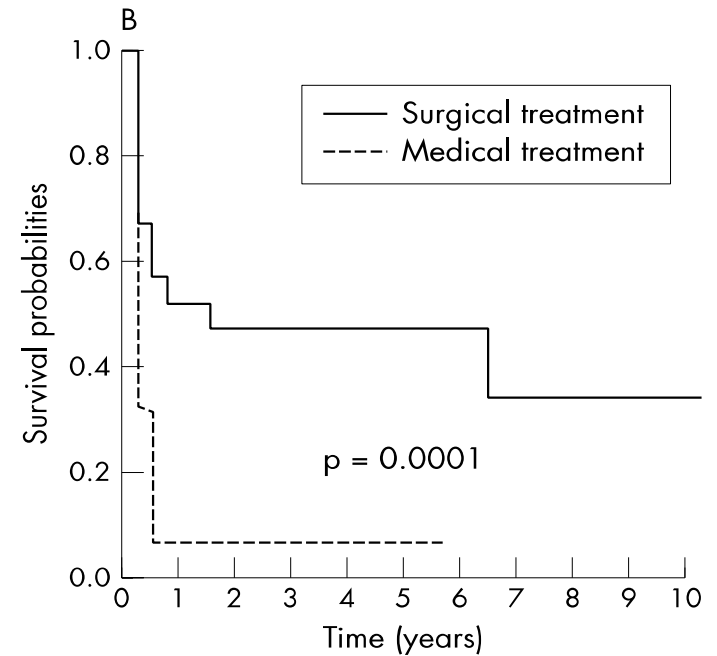
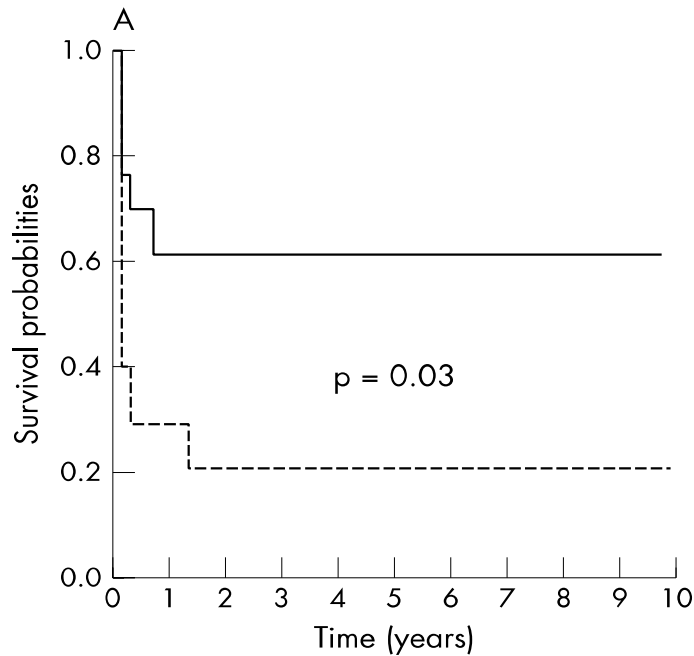
Michele Musci^{*}, Michael Hübler, Aref Amiri, Julia Stein, Susanne Kosky, Rudolf Meyer,
Yuguo Weng, Roland Hetzer

Deutsches Herzzentrum Berlin, Department of Cardiothoracic and Vascular Surgery, Augustenburger Platz 1, 13353 Berlin, Germany

Received 6 October 2009; received in revised form 26 February 2010; accepted 8 March 2010; Available online 23 May 2010



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Long term survival of patients with (A) staphylococcal prosthetic valve endocarditis (PVE) and (B) complicated PVE treated either medically or surgically.

Conclusions: Firstly, PVE not only carries a high in-hospital mortality risk but also is associated with high long term mortality and needs close follow up after the initial episode. Secondly, congestive heart failure, early PVE, staphylococcal infection, and complicated PVE are associated with a bad outcome. Thirdly, subgroups of patients could be identified for whom surgery is associated with a better outcome: patients with staphylococcal and complicated PVE. **Early surgery is strongly recommended for these patients.**



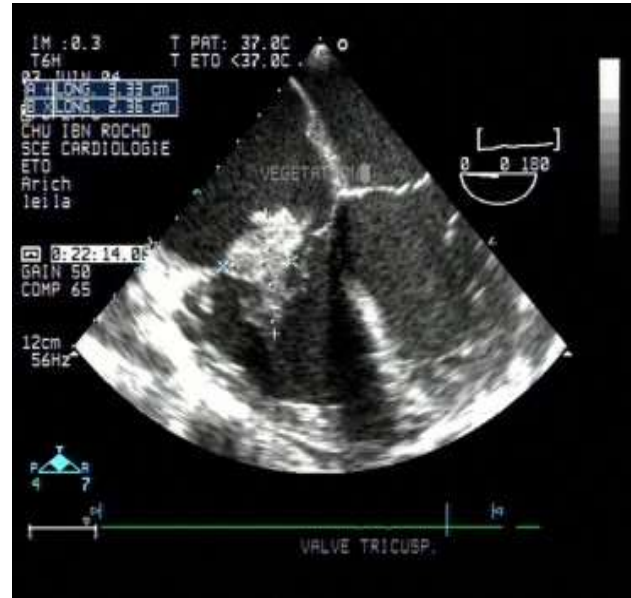
Endocardite delle sezioni destre

Cause:

- ++ Utilizzo di sostanze stupefacenti ev
- Difetti congeniti
- Cateterismo destro
- Da Divices impiantati (PM-ICD)
- Alcolismo e sepsi

Eziologia: S Aureus

Scelta della protesi: protesi biologiche



L'incidenza di IE associata all'uso di droghe continua ad aumentare, con un rischio noto di IE che è 100 volte superiore a quello della popolazione generale.

In un sondaggio sulla salute in tutto lo stato sponsorizzato dal National Institutes of Health nello stato della Carolina del Nord, il 42% di tutti gli interventi chirurgici alle valvole IE eseguiti tra il 2007 e il 2017 sono stati effettuati in pazienti con IE correlata all'uso di droghe per via parenterale.

Table 26 Indications for surgical treatment of right-sided infective endocarditis

Recommendation	Class ^a	Level ^b
Surgical treatment should be considered in the following scenarios: <ul style="list-style-type: none"> • Microorganisms difficult to eradicate (e.g. persistent fungi) or bacteraemia for > 7 days (e.g. <i>S. aureus</i>, <i>P. aeruginosa</i>) despite adequate antimicrobial therapy or • Persistent tricuspid valve vegetations > 20 mm after recurrent pulmonary emboli with or without concomitant right heart failure or • Right HF secondary to severe tricuspid regurgitation with poor response to diuretic therapy 	IIa	C

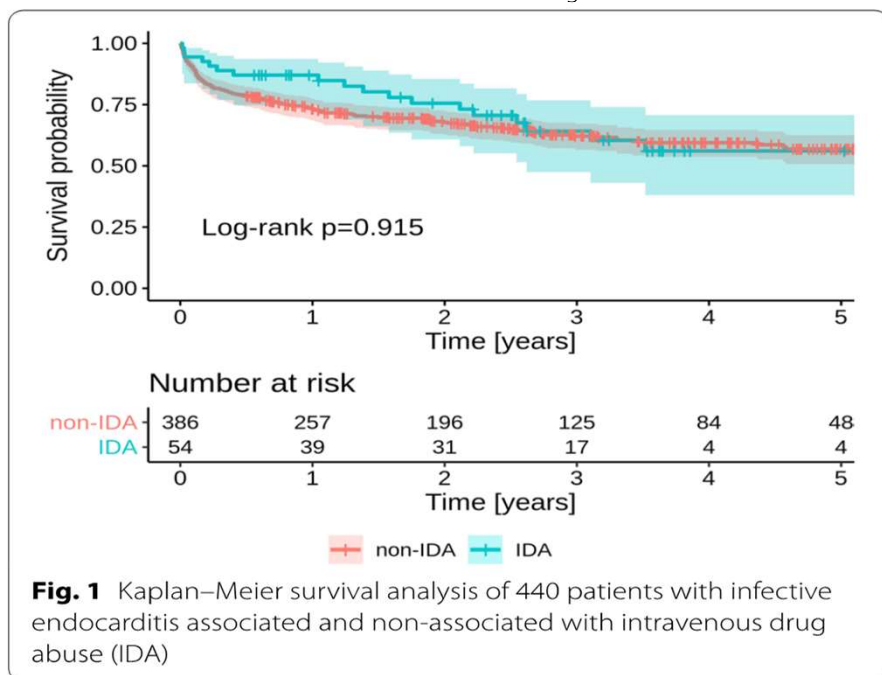




Infective endocarditis in intravenous drug abusers: clinical challenges emerging from a single-centre experience

Valentina Scheggi^{1*}, Stefano Del Pace², Nicole Ceschia², Francesco Vanni², Irene Merilli¹, Edoardo Sottili², Leonardo Salcuni², Nicola Zoppetti⁴, Bruno Alterini¹, Alfredo Cerillo³, Niccolò Marchionni^{2,5} and Pier Luigi Stefano^{3,5}

BMC Infect Dis (2021) 21:1010



Conclusions: IE secondary to IDA affects younger patients than those with IE not associated with IDA. Probably due to this difference, IE secondary to IDA is not associated with significantly higher mortality, whereas the negative, long-term prognostic impact of IDA emerges in multivariate analysis. Considering the good prognosis of patients with uncomplicated IE treated medically, surgery should be reserved to patients with a strict-guidelines-based indication. **However, since there are no clear predictors of an unfavourable risk–benefit ratio of surgery in patients with surgical indication, all patients with a complicated IE should be operated, irrespective of a history of IDA.**



Chirurgia: il timing

ORIGINAL ARTICLE

Early Surgery versus Conventional Treatment for Infective Endocarditis

Duk-Hyun Kang, M.D., Ph.D., Yong-Jin Kim, M.D., Ph.D.,
Sung-Han Kim, M.D., Ph.D., Byung Joo Sun, M.D., Dae-Hee Kim M.D., Ph.D.,
Sung-Cheol Yun, Ph.D., Jong-Min Song, M.D., Ph.D.,
Suk Jung Choo, M.D., Ph.D., Cheol-Hyun Chung, M.D., Ph.D.,
Jae-Kwan Song, M.D., Ph.D., Jae-Won Lee, M.D., Ph.D.,
and Dae-Won Sohn, M.D., Ph.D.



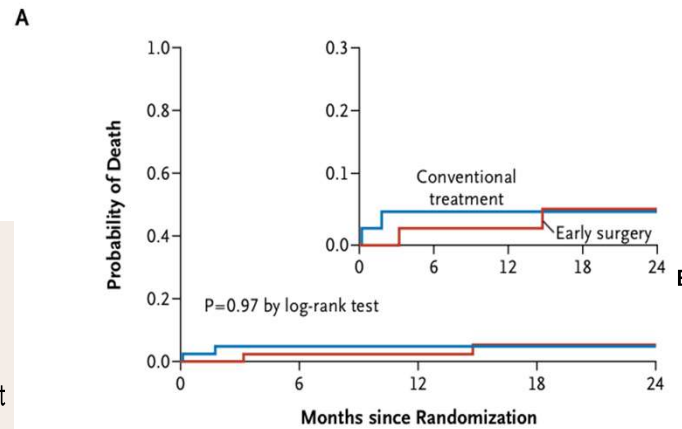
N Engl J Med 2012;366:2466-2473.



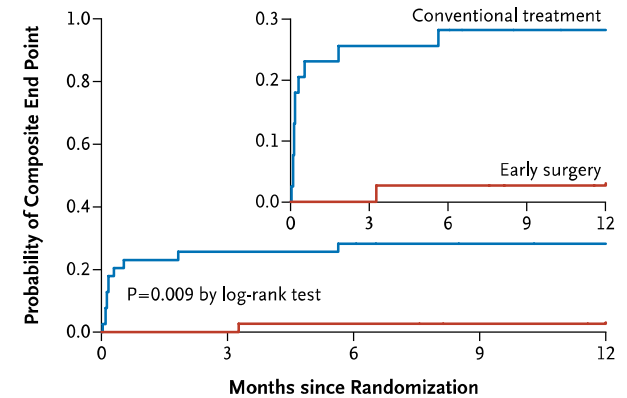
Chirurgia: il timing

Figure 2. Kaplan–Meier Curves for the Cumulative Probabilities of Death and of the Composite End Point at 6 Months, According to Treatment Group.

There was no significant between-group difference in all-cause mortality at 6 months (Panel A). The rate of the composite end point of death from any cause, embolic events, recurrence of infective endocarditis, or repeat hospitalization due to the development of congestive heart failure was 3% in the early-surgery group versus 28% in the conventional-treatment group (hazard ratio, 0.08; 95% CI, 0.01 to 0.65; $P=0.02$) (Panel B).



No. at Risk		0	6	12	18	24
Early surgery	37	36	33	28	21	
Conventional treatment	39	37	31	27	23	



No. at Risk		0	3	6	9	12
Early surgery	37	37	36	34	33	
Conventional treatment	39	29	28	25	24	

CONCLUSIONS

As compared with conventional treatment, early surgery in patients with infective endocarditis and large vegetations significantly reduced the composite end point of death from any cause and embolic events by effectively decreasing the risk of systemic embolism.



Chirurgia: il timing

Early Surgery in Patients with Infective Endocarditis: A Propensity Score Analysis

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Clin Infect Dis 2007; 44: 364-72

Sopravvivenza

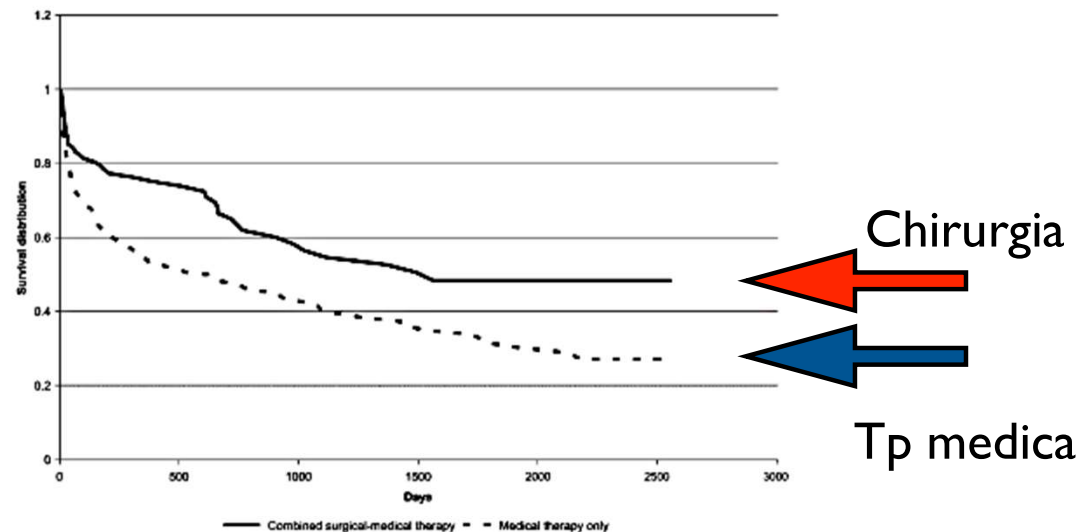


Figure 1. Unadjusted Kaplan-Meier survival curves of patients with infective endocarditis (IE) who received only medical therapy versus patients with IE who received surgical and medical therapy. At 6 months after treatment, 252 patients were considered to be at risk; at 1 year, 213 patients were at risk; at 2 years, 142 patients were at risk; at 3 years, 97 patients were at risk; at 4 years, 70 patients were at risk; and at 5 years, 40 patients were at risk.



Early Surgery in Infective Endocarditis



Can it Be Too Early?*

Michael J. Mack, MD,^a Patrizio Lancellotti, MD^{b,c}

TABLE 1 Factors That Mitigate Toward Early Surgery in Infective Endocarditis

Infecting organism
Fungus
Enterococcus (vancomycin-resistant)
Staphylococcus
Multidrug resistant Gram-negative bacilli
Size and mobility of vegetation
>10 mm
Enlarging on antibiotics
Anterior leaflet mitral valve
Paravalvular infection
Heart block
Annular/periaortic abscess
Recurrent embolism
Severe valve regurgitation
Heart failure

Approximately 50% of patients with infective endocarditis (IE) will require early surgery (i.e., during the initial hospitalization before the completion of a full therapeutic course of antibiotics) (1).

With early surgery, there are concerns that performing the procedure during an active infection, before the valve is completely sterilized, may lead to an increase in post-operative complications. However, recently it has been suggested that early surgical intervention with <7 days of pre-operative antibiotic therapy is associated with a lower risk of mortality in comparison with surgery performed between 8 and 20 days after the initiation of antibiotics (2).

Indeed, in general, clinical practice has moved more aggressively toward earlier surgical intervention.



Early surgery:



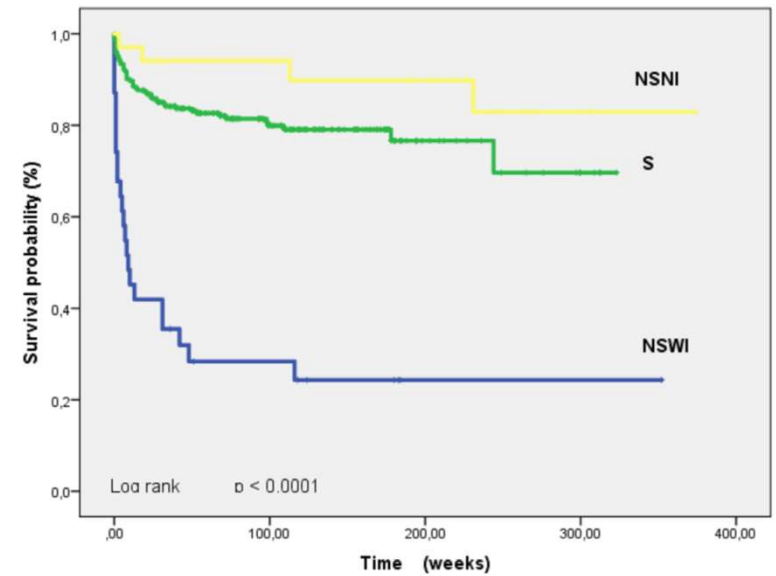
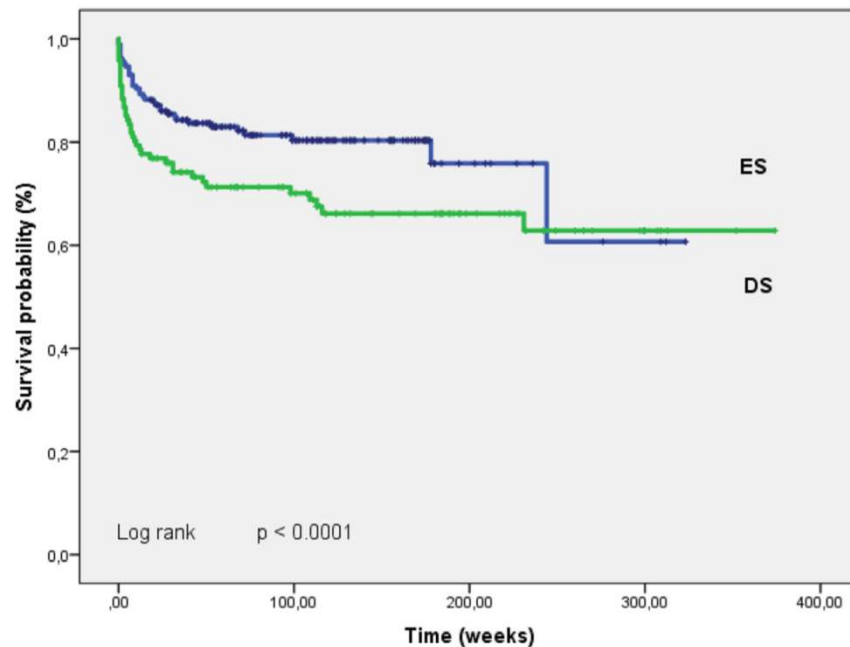
Embolism

Repair

Original article

EMBOLIC RISK STRATIFICATION AND PROGNOSTIC IMPACT OF EARLY SURGERY IN LEFT-SIDED INFECTIVE ENDOCARDITIS

Valentina Scheggi^{a,*,#}, Bruno Alterini^{a,#}, Iacopo Olivetto^{b,#}, Stefano Del Pace^{b,#}, Nicola Zopetti^c, Benedetta Tomberli^{b,#}, Filippo Bartalesi^{d,#}, Lorenzo Brandi^{a,#}, Nicole Ceschia^{a,#}, Valentina Andrei^{a,#}, Lorenzo Roberto Suardi^{d,#}, Niccolò Marchionni^{b,#}, Pier Luigi Stefàno^{c,#}



Survival probability (\pm 95%CI) in surgical and non surgical patients with infective endocarditis. NSWI: no surgery, with indication to it; NSNI: no surgery no indication to it; S: surgery

Figure 1. Survival probability (\pm 95%CI) in early (<2 weeks, ES) and delayed (>2 weeks, DS) surgery.



L'endocardite su Protesi Transcatetere

- **Può verificarsi anche dopo impianto di bioprotesi transcatetere (TAVI)**
- **Il rischio di aumenta in caso di intubazione orotracheale o con l'utilizzo di un sistema autoespandibile**

Caso Clinico

Donna 80 anni

Consulenza geriatrica: MPI 0,19

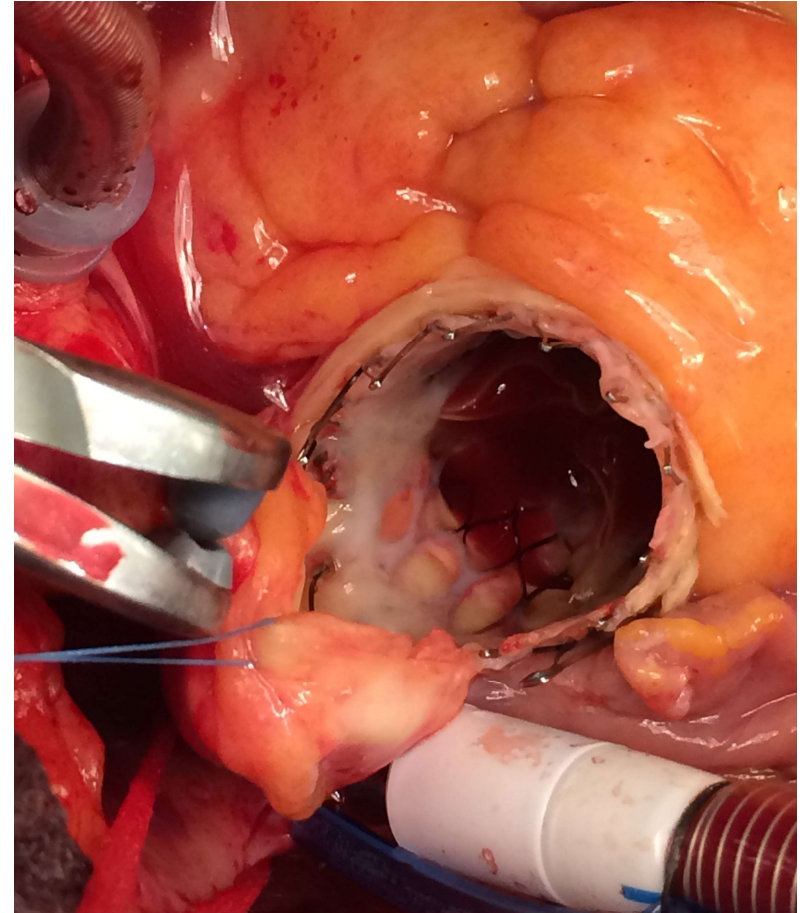
Indicazione a TAVI per Età e presenza di estese calcificazioni Ao

19/5/20: Impianto di protesi Evolut Pro 23 mm

Novembre 21 Edema polmonare e febbre persistente

diagnosi di endocardite su Protesi

Indicazione chirurgica in urgenza





L'angio-TC ha mostrato trombosi della cuspidi sinistra e non coronarica della protesi e l'aorta di ascendente a porcellana possibilità di incannulazione per la CPB.



L'endocardite su Protesi transcatetere





Nonostante un punteggio di rischio molto alto (STS PROM: 10,38%), la paziente è stata sottoposta ad intervento chirurgico.

La CPB è stata ottenuta utilizzando l'arteria ascellare destra e l'atrio destro.

A causa dell'estrema calcificazione aortica, della radice aortica ostile vi era l'impossibilità di attraversare la radice e l'anulus aortico con alcun tipo di misuratore valvolare

Risoluzione dei problemi: è stata sostituita prima l'aorta ascendente e successivamente paracadutato una valvola sutureless.

Dopo 18 mesi di follow-up, non sono segnalati eventi negativi.

Conclusioni

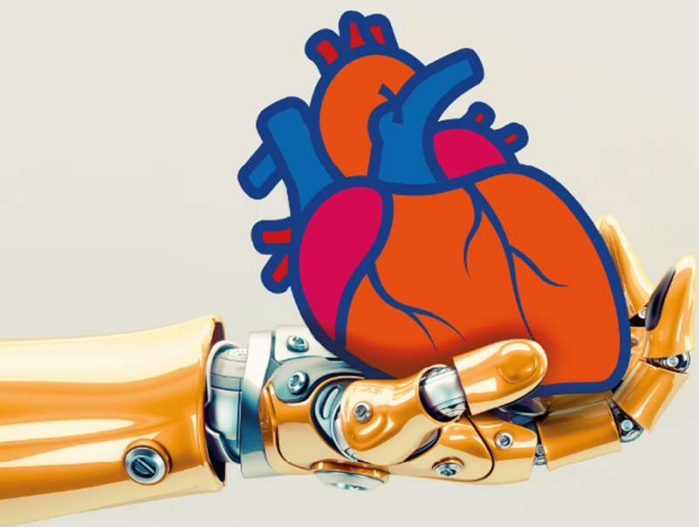
- 1) **IE** è in esponenziale crescita nell'ultimo decennio e la mortalità rimane elevata
- 2) **Terapia medica** nelle IE non complicate e con vegetazioni < a 10 mm (con particolare attenzione alle **PVE** per il maggiore rischio emboligeno e di lesioni destruenti anulari)
- 3) **Terapia chirurgica** sempre nelle endocarditi complicate e nelle lesioni complesse e con vegetazioni > di 15 mm
- 4) **Early surgery** è associata a una riduzione del tasso di complicanze emboliche nei pazienti che presentano IE del lato sinistro, VHD grave e ampie vegetazioni (>10 mm).
→ Riduzione della mortalità e maggiore possibilità di riparazione valvolare
- 5) I fattori associati a un **nuovo evento embolico** sono la dimensione della vegetazione >10 mm e la marcata mobilità della vegetazione (soprattutto se associata al lembo anteriore della valvola mitrale)



Conclusioni

- 6) Terapia chirurgica precoce anche nelle **IE complicate da embolizzazione cerebrale** dopo attenta valutazione del rischio e delle condizioni cliniche
- 7) **Endocarditi destre** Early Surgery anche con vegetazioni inferiori a 20 mm
- 8) La riparazione valvolare va sempre preferita (quando possibile) alla sostituzione valvolare per il ridurre il rischio di recidive
- 9) **Le IE non complicate ma con vegetazioni > 10 mm** visto i risultati della letteratura più recente dovrebbero essere in **classe I**





17° Meeting

CardioLucca

Heart Brings Heart 2023

Lucca, 22-24 Giugno 2023

Centro Congressi Auditorium San Francesco



Grazie per l'attenzione



Prof. Pierluigi Stefàno Cardiocirurgia Università di