LA GESTIONE DELLE LESIONI DIFFICILI OGGI

Il punto di vista del chirurgo

P. Bonadeo

Dipartimento di Chirurgia
Week – Day Surgery
ASL AL P.O. Tortona

GESTIONE

L'insieme delle azioni poste in essere per perseguire determinati obiettivi e compiere scelte riguardanti persone e tecnologie

MANAGEMENT

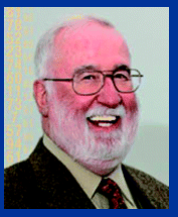
Processo di definizione degli obiettivi e di guida della gestione al fine del raggiungimento di tali obiettivi attraverso l'assunzione di decisioni sull'impiego migliore delle risorse disponibili.

L'insieme delle persone responsabili del processo (scenari e attori).

UN MITO DA SFATARE

L'ulcera cutanea non esordisce come DIFFICILE ma lo può diventare per diagnosi o assente o errata o tardiva oppure per una gestione non appropriata o per mancanza di risorse umane o economiche e, sempre, per inadeguata formazione.

Evidence Based Medicine (Sackett, 1992)



Processo della individuazione,
della valutazione e dell'uso sistematico
dei risultati della ricerca contemporanea
come base per le decisioni cliniche

Evidence Based Practice (Sackett)

- Consapevolezza di acquisire nuove informazioni
- Esperienze nella pratica clinica
- Considerazione globale del paziente dal suo punto di vista e nella sua condizione

SEDE di trattamento

- Domiciliare
- Ambulatoriale

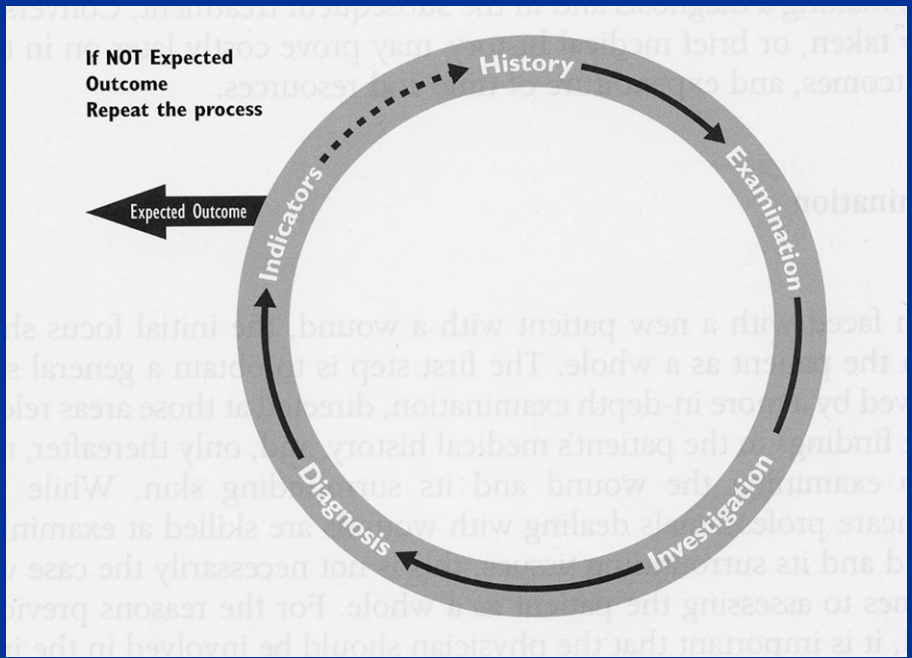
(dedicato, non dedicato)

- Ospedaliero

PROBLEMI

- Esattezza della diagnosi
  - * oneri per indagini non appropriate
  - * “nomadismo” dei pazienti

- Conoscenza e capacità di uso (maneggevolezza) dei mezzi a disposizione (“eclettismo razionale”) = corrette indicazioni = calcolo costo-beneficio favorevole



Multidisciplinarietà

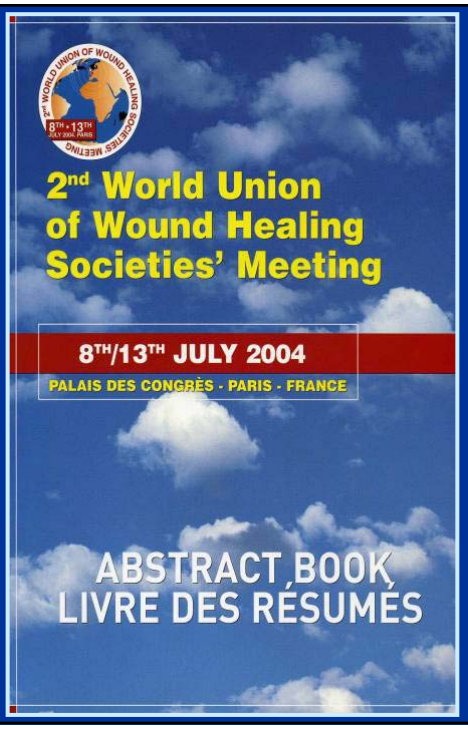
- Chirurgo vascolare
- Chirurgo generale
- Chirurgo plastico
- Chirurgo ortopedico

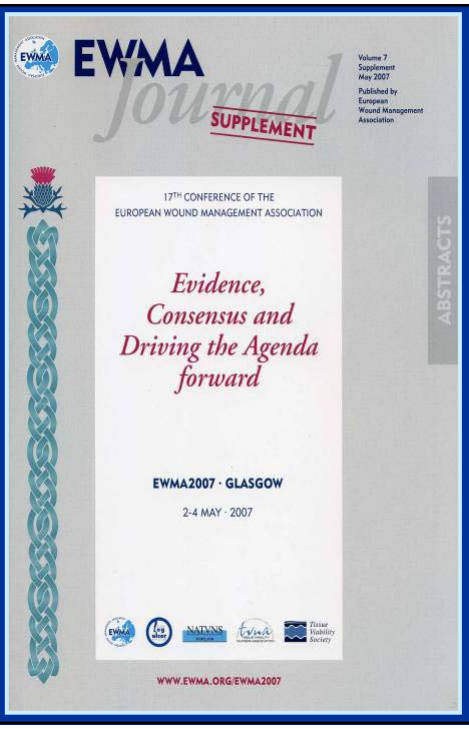
- Angiologo
- Dermatologo
- Internista
- Diabetologo
- Reumatologo
- Geriatra
- Algologo
- Genetista

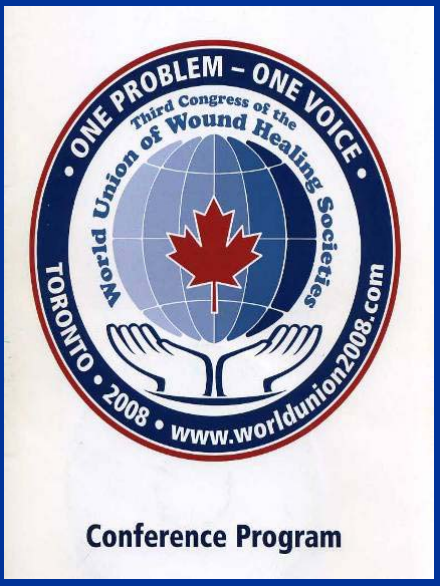
- Fisiatra
- Nutrizionista
- Psicologo

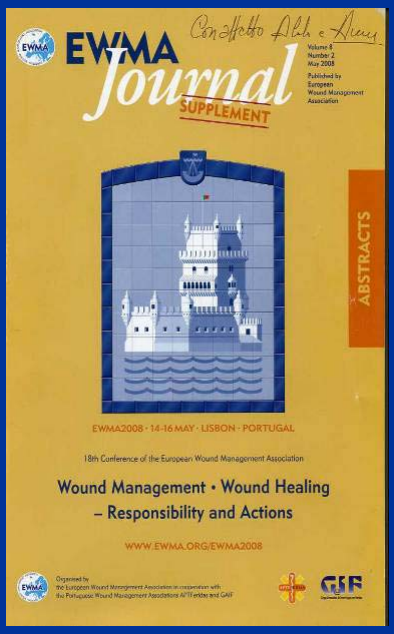
Infermiere

→ Approccio olistico

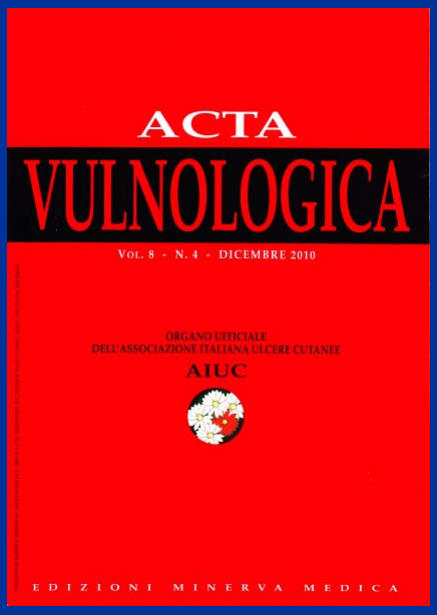



EWMA
journal
SUPPLEMENT
Volume 7
Supplement
May 2007
Published by
European
Wound Management
Association
17TH CONFERENCE OF THE
EUROPEAN WOUND MANAGEMENT ASSOCIATION
Evidence,
Consensus and
Driving the Agenda
forward
EWMA2007 · GLASGOW
2-4 MAY · 2007
ABSTRACTS
WWW.EWMA.ORG/EWMA2007


ONE PROBLEM – ONE VOICE
Third Congress of the
World Union of Wound Healing Societies
TORONTO • 2008 • www.worldunion2008.com
Conference Program


EWMA
Journal
SUPPLEMENT
Volume 8
Number 2
May 2008
Published by
European
Wound Management
Association
ABSTRACTS
EWMA2008 · 14-16 MAY · LISBON · PORTUGAL
18th Conference of the European Wound Management Association
Wound Management • Wound Healing
– Responsibility and Actions
WWW.EWMA.ORG/EWMA2008

K. HARDING



Associazione Italiana Ulcere Cutanee (AIUC)

DOCUMENTO DI POSIZIONAMENTO

La terapia farmacologica e chirurgica dell'ulcera venosa

G. GUARNERA, P. BONADEO, E. MARCHITELLI, A. CRESPI

PRESENTAZIONE

Onore e piacere nel presentare questa opera letterario-scientifica coordinata dal caro amico Giorgio Guarnera. Questo documento di posizionamento sulla ulcera venosa può sembrare un proseguo del precedente libro "L'ulcera cutanea degli arti inferiori", invero rappresenta una evoluzione, frutto della maturazione del percorso dell'Autore. Dalla costituzione di una Società Scientifica rivolta all'ulcera quale sintomo o segno, esito di una *malpractice* da parte del medico o del paziente verso se stesso, alla critica costruttiva di un esperto in malattie vascolari abituato a domandarsi chi siamo, da dove veniamo, dove andiamo. La lesione trofica, come abbiamo detto, è solo l'esito di una malattia che ne rappresenta la patogenesi e, dunque, sottintende una appropriata e specifica diagnosi e conseguente terapia. La scelta del presidio terapeutico locale e il timing variano, infatti, a seconda della causa che ha prodotto l'esito in ulcera. Per questo, credo che l'apparente limitazione alla patologia venosa sia soltanto il primo numero di un romanzo a puntate che, con garbo, introduce ad un percorso maturo rivolto all'eziopatogenesi e dunque un esplicito e sorridente invito a saperne qualcosa di più sulle cause, sul bagaglio culturale globale, sull'essere medico e non tecnico di medicazioni locali, pur nell'ambito di una reciproca e indissolubile collaborazione con quest'ultimo. Linee Guida dunque come raddrizzamento di rotta, passaggio da movimento di opinione a partito strutturato nell'arco costituzionale della Medicina. Questa monografia è conseguenzialmente un programma, un invito a un percorso culturale che unisce medico e infermiere nelle stesse problematiche, sia pratiche che cognitive, e fa di questa seconda figura un personaggio qualificato, con un linguaggio tecnico ed un bagaglio di conoscenze finalizzate alla risoluzione della patologia ulcerativa.

Un complimento agli Autori per il lavoro scientifico e in particolare all'amico Giorgio per il suo noto fair-play nel correggere migliorando questo campo di ricerca, il tutto accompagnato da un sorriso complice.

PROF. CLAUDIO ALLEGRA
Presidente CIF (Collegio Italiano di Flebologia)

PRINCIPI FONDAMENTALI

- Diagnosi corretta
- Preparazione del fondo della lesione
- Correzione delle alterazioni emodinamiche
- Strategie preventive della recidiva
- Qualità di vita
- Contenimento dei costi

ULCERE VASCOLARI

- **Terapia topica**
- Correzione dell'ipertensione e della stasi
  - **Elastocompressione**
  - **Terapia medica**
  - **Sclerosterapia**
  - **Chirurgia**
- Rivascolarizzazione arteriosa
- Chirurgia ricostruttiva
- Esercizio fisico programmato
- Riabilitazione vascolare

RECIDIVE - ULCERE VENOSE

- Terapia conservativa 58%
- Innesti cutanei 78%
- Elastocompressione 30%

CHIRURGIA - ULCERE VENOSE

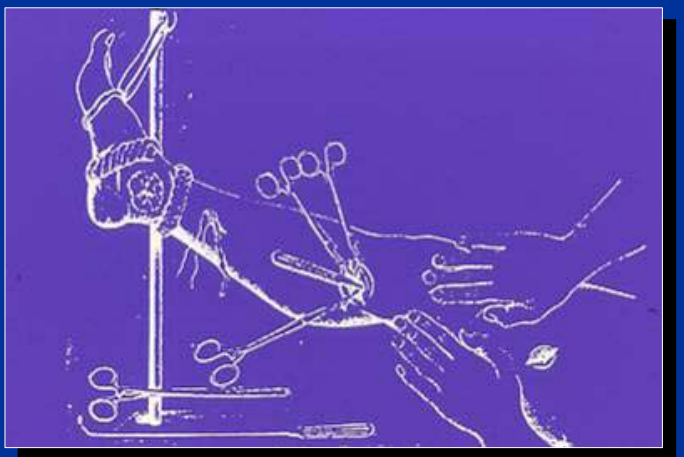
☞ Obiettivi :

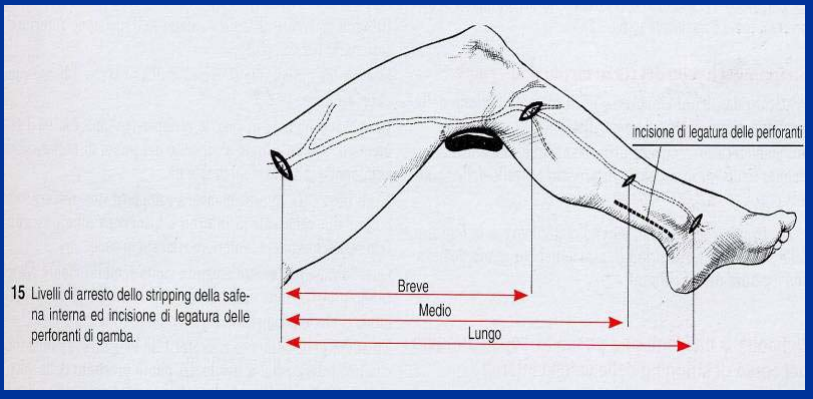
- Riduzione dell'ipertensione venosa (stasi)
- Riduzione dell'edema (+ Elastocompressione!)
- Riduzione dei tempi di guarigione (?)
- Riduzione del numero delle recidive

CHIRURGIA - ULCERE VENOSE

☞ Chirurgia del sistema venoso superficiale :

- Crossectomia
- Stripping safenico (abolizione reflussi lunghi) + flebectomie
- Legatura vv. perforanti / comunicanti incontinenti (tecnica aperta SEPS) (abolizione reflussi brevi)
- ELT, occlusione con radiofrequenza
- Flebectomie per transilluminazione





15 Livelli di arresto dello stripping della safena interna ed incisione di legatura delle perforanti di gamba.

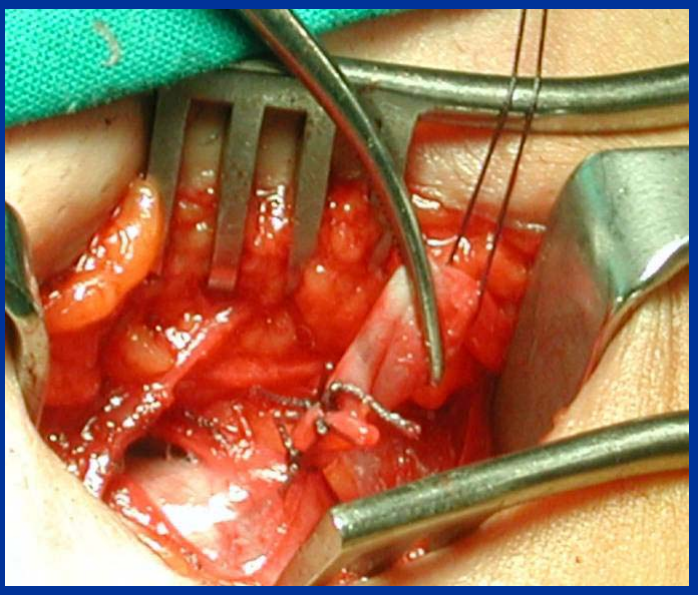
TERAPIA CHIRURGICA
delle VARICI
OESCH (1993)

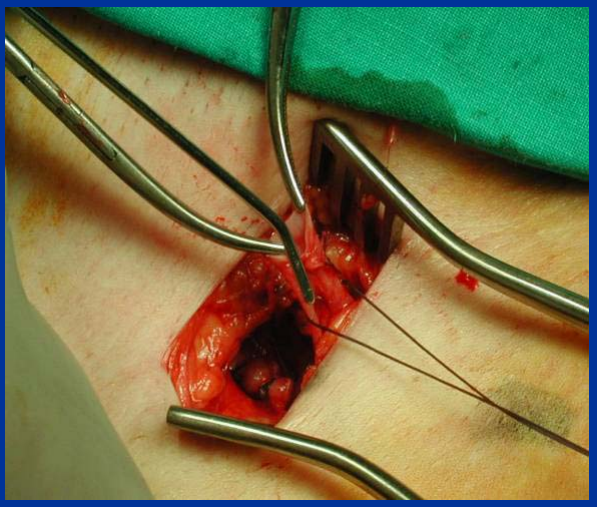
PIN - STRIPPING

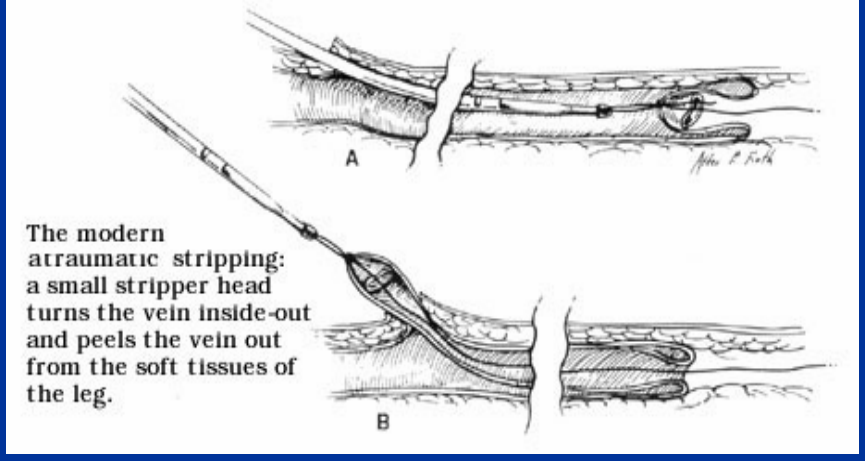
(stripping per perforazione e invaginazione)

Stripping corto mediante strumento rigido con estremità

distale appuntita e angolata con micro controincisione







The modern atraumatic stripping: a small stripper head turns the vein inside-out and peels the vein out from the soft tissues of the leg.

UNCINI PER FLEBECTOMIA

MULLER

OESCH

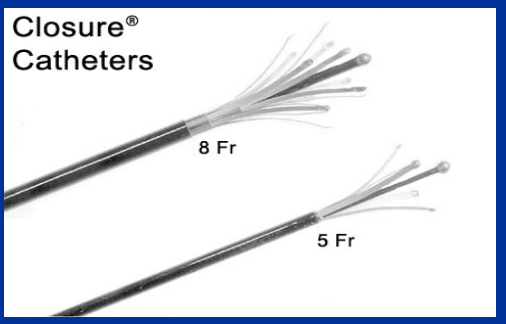
RAMELET

CHIRURGIA DELLE VV. PERFORANTI

- N° VARIABILE: 80 – 140 PER ARTO INFERIORE
- ECOCOLORDOPPLER (CONTROVERSIE)
- PATOLOGIA: REFLUSSO > 1.0 SEC; CALIBRO > 2 MM
- SEVERITA' CLINICA: N° PERFORANTI + COINVOLGIMENTO MULTISISTEMA
- ULCERE C5 – C6
- DISTROFIE CUTANEE C4

Nuove terapie nel trattamento dell'insufficienza venosa cronica degli arti inferiori

Radiofrequenza
Laser
Scleroterapia ecoguidata
(scleromousse)
Flebectomie per transilluminazione




1. Catheter inserted


2. Vein warmed and collapses


3. Catheter slowly withdrawn, closing vein

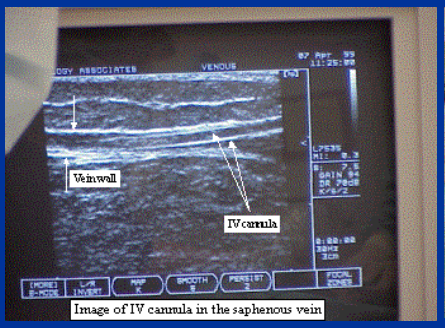


Image of IV cannula in the saphenous vein


Localizing the vein access site with ultrasound

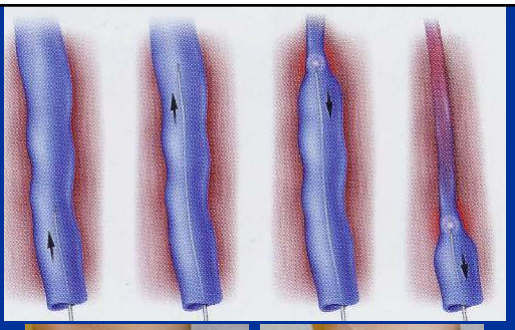
Nuove terapie nel trattamento dell'insufficienza venosa cronica degli arti inferiori

Radiofrequenza

Laser

Scleroterapia ecoguidata (scleromousse)

Flebectomie per transilluminazione

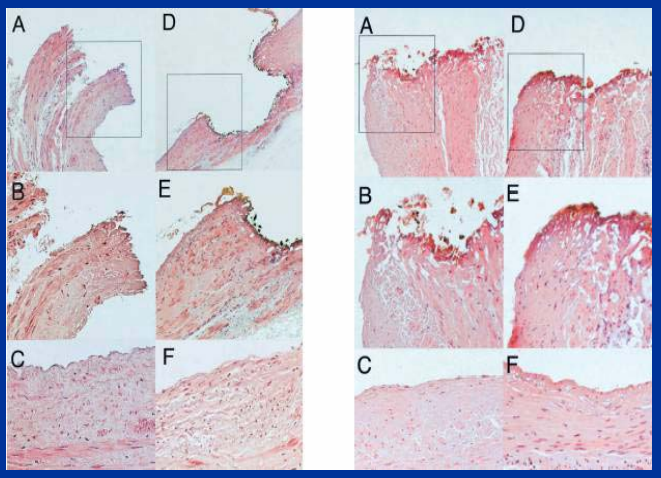


Before EVLT

After EVLT

DIOMED

LASER

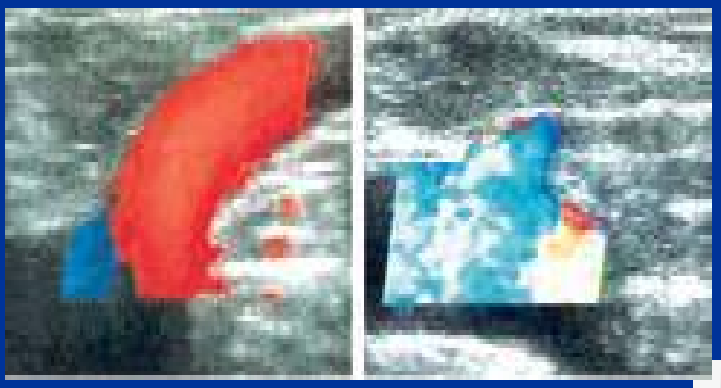


Proebstle TM: Thermal.damage of the inner vein wall during endovenous laser treatment: key role of energy absorption by intravascular blood. Dermatol Surg. 2002; 28:596-600.

LASER

Min RJ: Endovenous laser treatment of the incompetent greater saphenous vein. J Vasc Int Rad 2001; 12: 1167-1171.

LASER



Min RJ: Endovenous laser treatment of the incompetent greater saphenous vein. J Vasc Int Rad 2001; 12: 1167-1171.

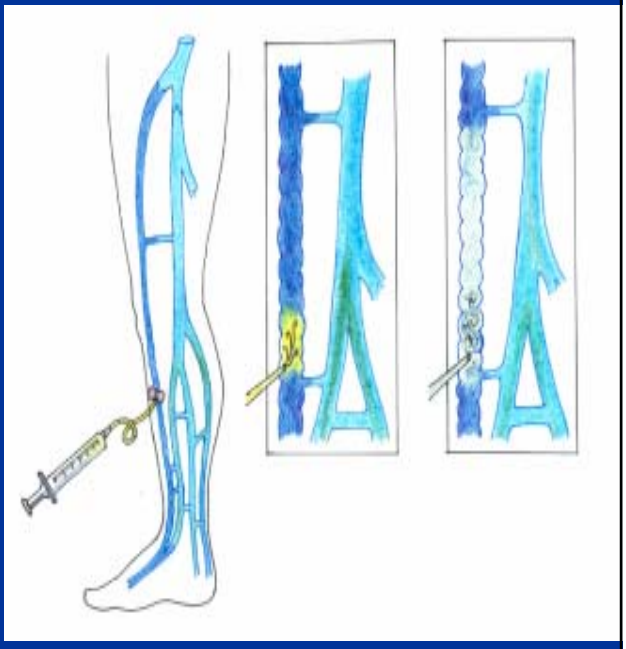
LASER

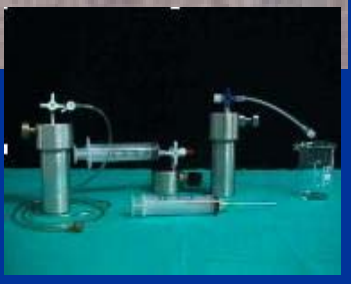
Min RJ: Endovenous laser treatment of the incompetent greater saphenous vein. J Vasc Int Rad 2001; 12: 1167-1171.

Nuove terapie nel trattamento dell'insufficienza venosa cronica degli arti inferiori

Radiofrequenza
Laser
Scleroterapia ecoguidata (scleromousse)
Flebectomie per transilluminazione

E.J. ORBACH:
"*Sclerotherapy of varicose veins: utilization of intravenous air block*".
Am J Surg 1944; 362-366

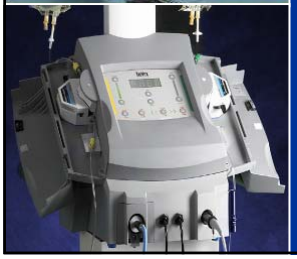




Nuove terapie nel trattamento dell'insufficienza venosa cronica degli arti inferiori

Radiofrequenza
Laser
Scleroterapia ecoguidata
(scleromousse)
Flebectomie per transilluminazione

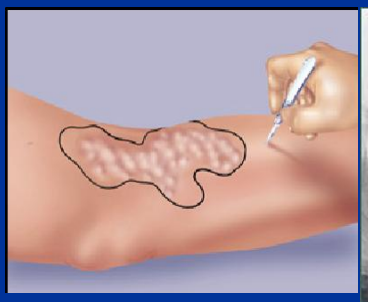
TRIVEX SYSTEM

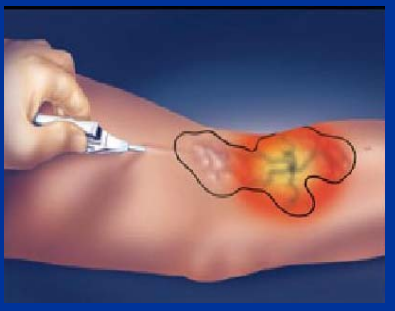


Illuminatore/Irrigatore

Resettore/Aspiratore

TRIVEX SYSTEM



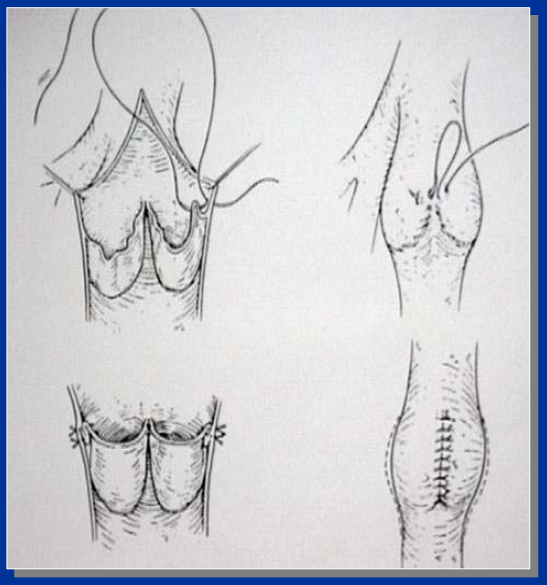


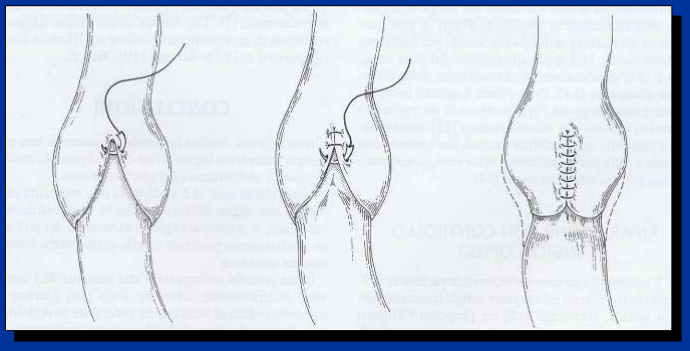
CHIRURGIA - ULCERE VENOSE

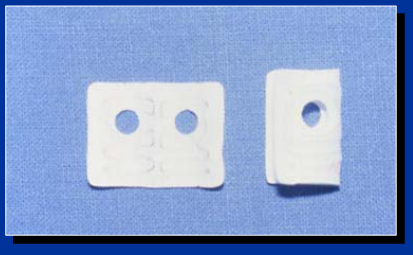
☞ Chirurgia del sistema venoso profondo :

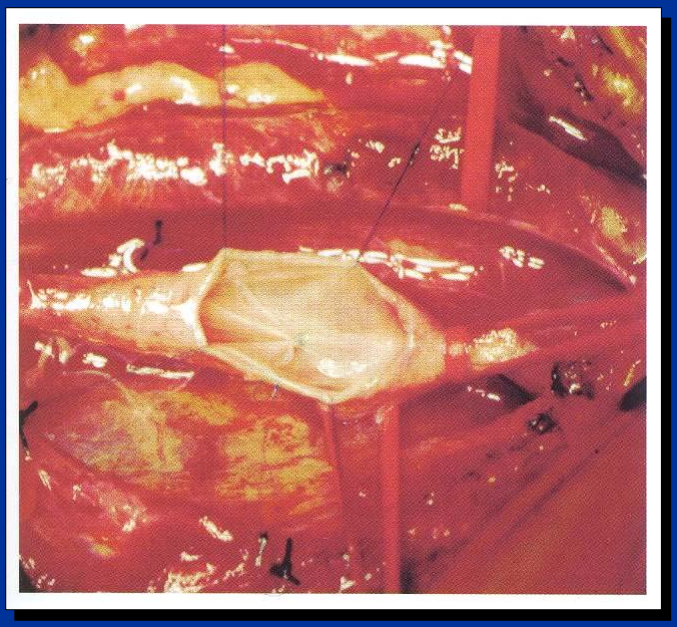
- Trasposizioni valvolari
- Ricostruzioni valvolari
- Sostituzioni con segmenti valvolati
- Bypass venosi
- Valvuloplastiche esterne

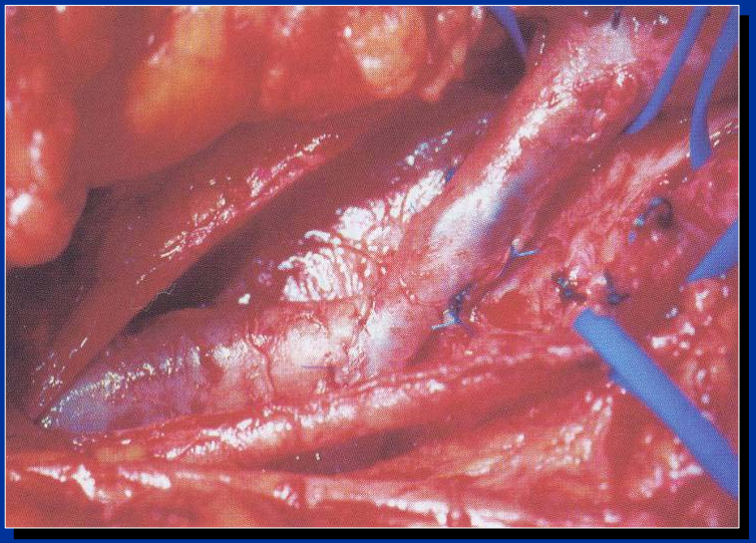
RICOSTRUZIONI VALVOLARI

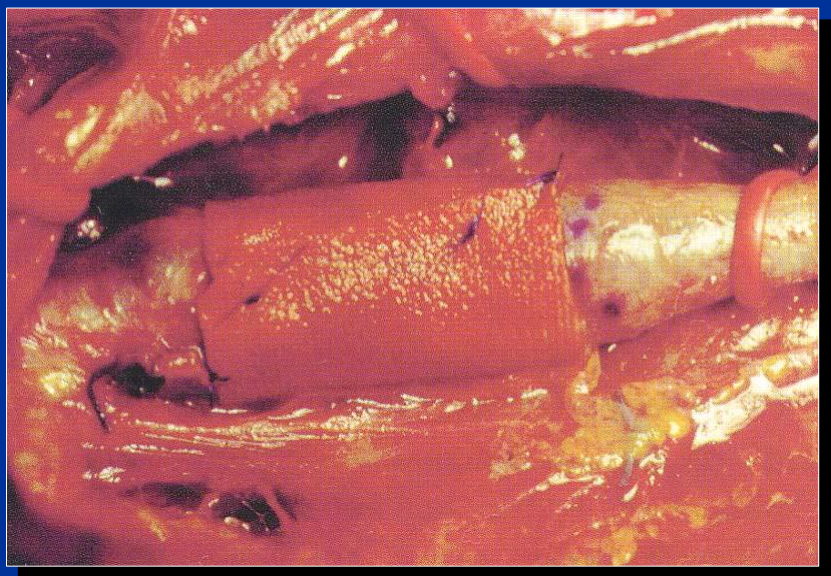




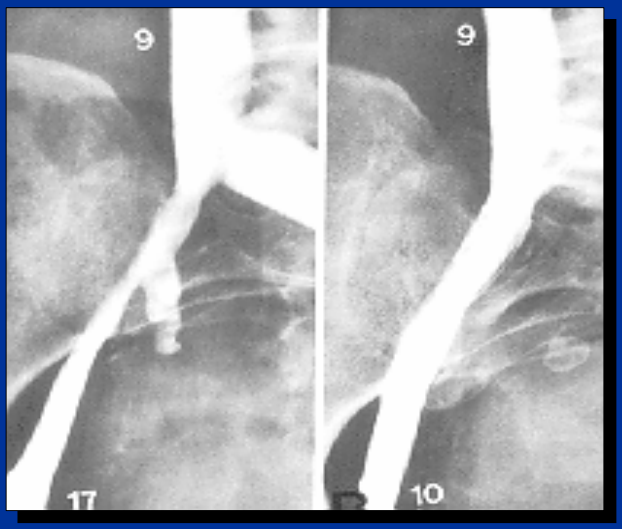








CHIRURGIA ENDOVASCOLARE VENOSA



CHIRURGIA - ULCERE VENOSE

☞ Risultati :

	Recidive a 4 anni
• Chirurgia sistema venoso superficiale	10 %
• Legatura isolata VCI	20 %
• SEPS	16 %
• Chirurgia sistema venoso profondo	25 - 60 %

Istituto di Chirurgia Vascolare e Angiologia Università di Milano (Direttore: Prof. G. Agrifoglio)

Chirurgia del sistema venoso superficiale (varici + ulcere)

	senza chirurgia	con chirurgia
• N° pazienti: 500	298	202
• Guarigione a 12 mesi	37 %	63 %
• Recidive a 36 mesi	39 %	5 %

THE LANCET • Vol 363 • June 5, 2004 • www.thelancet.com

Comparison of surgery and compression with compression alone in chronic venous ulceration (ESCHAR study): randomised controlled trial

Jamie R Barwell, Colin E Davies, Jane Deacon, Kate Harvey, Julia Minor, Antonio Sassano, Maxine Taylor, Jenny Usher, Clare Wakely, Jonathan J Earnshaw, Brian P Heather, David C Mitchell, Mark R Whyman, Keith R Poskitt

- **Ridotto numero di recidive**
- **Stabilità di guarigione**
- **Ridotta sofferenza**

BMJ

RESEARCH

Long term results of compression therapy alone versus compression plus surgery in chronic venous ulceration (ESCHAR): randomised controlled trial

Manjit S Gohel, specialist registrar,[1] Jamie R Barwell, consultant vascular and transplant surgeon,[2] Maxine Taylor, leg ulcer nurse specialist,[3] Terry Chant, vascular nurse specialist,[3] Chris Foy, medical statistician,[4] Jonothan J Earnshaw, consultant surgeon,[5] Brian P Heather, consultant surgeon,[3] David C Mitchell, consultant surgeon,[3] Mark R Whyman, consultant surgeon,[1] Keith R Poskitt consultant surgeon[1]

[1]Cheltenham General Hospital, Cheltenham, Gloucester GL53 7AN [2]Derriford Hospital, Plymouth [3]Southmead Hospital, Bristol [4]Gloucestershire Hospitals NHS Trust, Gloucester [5]Gloucestershire Royal Hospital, Gloucester

Correspondence to: K R Poskitt keith.poskitt@glos.nhs.uk

doi: 10.1136/bmj.38196.541442.3E

ABSTRACT

Objective To determine whether recurrence of leg ulcers may be prevented by surgical correction of superficial venous reflux in addition to compression.

Design Randomised controlled trial.

Setting Specialist nurse led leg ulcer clinics in three UK vascular centres.

Participants 500 patients (500 legs) with open or recently healed leg ulcers and superficial venous reflux.

Interventions Compression alone or compression plus saphenous surgery.

Main outcome measures Primary outcomes were ulcer healing and ulcer recurrence. The secondary outcome was ulcer free time.

Results Ulcer healing rates at three years were 89% for the compression group and 93% for the compression plus surgery group (P=0.73, log rank test). Rates of ulcer recurrence at four years were 56% for the compression group and 31% for the compression plus surgery group (P<0.01). For patients with isolated superficial reflux, recurrence rates at four years were 51% for the compression group and 27% for the compress plus surgery group (P<0.01). For patients who had superficial with segmental deep reflux, recurrence rates at three years were 52% for the compression group and 24% for the compression plus surgery group (P=0.04). For patients with superficial and total deep reflux, recurrence rates at three years were 46% for the compression group and 32% for the compression plus surgery group (P=0.33). Patients in the compression plus surgery group experienced a greater proportion of ulcer free time after three years compared with patients in the compression group (78% v 71%; P=0.007, Mann-Whitney U test).

Conclusion Surgical correction of superficial venous reflux in addition to compression bandaging does not improve ulcer healing but reduces the recurrence of ulcers at four years and results in a greater proportion of ulcer free time.

Trial registration Current Controlled Trials ISRCTN07549334.

INTRODUCTION

In recent years the importance of the effect of venous leg ulceration on healthcare expenses and patients' quality of life has been recognised.[1-4] European studies have reported a prevalence of 1% in the adult population, increasing dramatically in those aged more than 80.[5-7] The precise pathophysiological mechanisms causing ulceration remain debatable, although chronic venous hypertension (usually as a result of venous reflux) is generally accepted to play a major part.[8-9]

Chronic venous hypertension may be countered by high elevation of the leg and multilayered compression bandaging, applied by trained staff within the setting of a specialist leg ulcer service. Excellent healing rates have been reported with this approach.[9-11] Strategies to prevent ulcer recurrence include patient education and class 2 elastic compression stockings.[12] Stockings are often difficult to put on and uncomfortable, however, resulting in poor patient compliance.[13] Moreover, conservative approaches do little to correct the underlying problem of chronic venous hypertension.

Anatomical studies using colour venous duplex ultrasonography have shown that incompetence in superficial veins (long or short saphenous) is present in most legs with chronic ulceration, sometimes in combination with deep venous reflux.[14-15] Isolated reflux in deep or perforating veins is uncommon.[11,14] Several surgical strategies to correct the underlying venous anatomical abnormalities have been attempted. Deep venous procedures may be associated with high complication rates, and studies have shown little clear benefit.[17] However, several studies have suggested that corrective surgery for superficial venous reflux may have clinical benefits for ulcer healing and recurrence.[18-20]

The effect of surgery and compression on healing and recurrence (ESCHAR) study aimed to assess these outcomes in patients with chronic venous leg ulceration. The early results have been published and suggested that compression along with superficial venous surgery may reduce recurrence rates.[21] We present the long term findings.

Eur J Vasc Endovasc Surg **25**, 313–318 (2003)
doi:10.1053/ejvs.2002.1871, available online at http://www.sciencedirect.com on SCIENCE DIRECT®

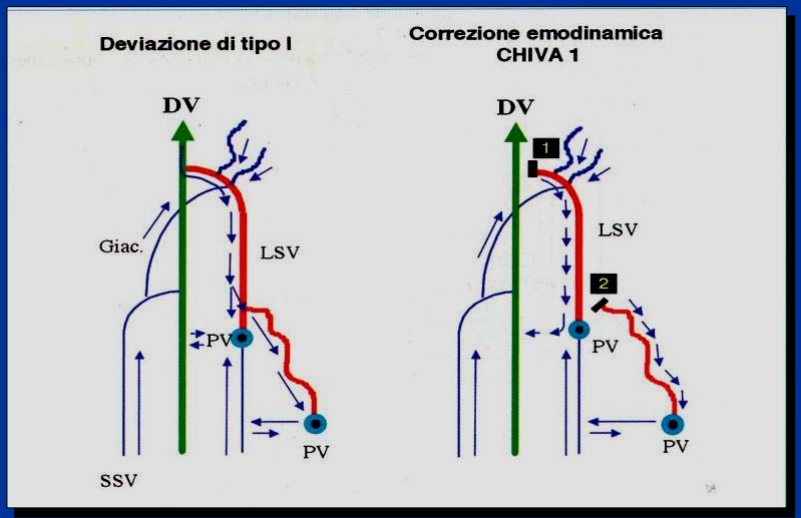
Minimally Invasive Surgical Management of Primary Venous Ulcers vs. Compression Treatment: a Randomized Clinical Trial

P. Zamboni*, C. Cisno, F. Marchetti, P. Mazza, L. Fogato, S. Carandina, M. De Palma and A. Liboni

Department of Surgical, Anaesthesiological, and Radiological Sciences, Day-Surgery Unit, University of Ferrara, Italy

Objectives: *to compare minimally invasive surgical haemodynamic correction of reflux (CHIVA) with compression in the treatment of venous ulceration.*
Design: *prospective randomised study.*
Materials and Methods: *from a cohort of 80 patients with 87 venous leg ulcers, 47 were randomised to either surgery or compression.*
Results: *at a mean follow-up of 3 years, healing was 100% (31 days) in the surgical and 96% (63 days), in the compression group ($p < 0.02$). The recurrence rate was 9% in the surgical and 38% in the compression group ($p < 0.05$). In the surgical group, all plethysmographic parameters except ejection fraction, had improved significantly at 6 months in the surgical group, and at 3 years residual volume fraction remained in the normal range. Finally, quality of life significantly improved in the operated group.*
Conclusions: *this study supports the effectiveness of surgical therapy for leg ulceration secondary to superficial venous reflux.*

Key Words: Primary venous ulcers; Minimally invasive surgery; Venous haemodynamics; CHIVA; Compression; Quality of life.



Surgery for venous leg ulcers

Can reduce recurrence, but will have little impact on prevalence

RESEARCH, p 83

Charles N McCollum professor of surgery
Education and Research Centre, University Hospital of South Manchester, Manchester M23 9LT
cnmcc@pmanchester.ac.uk

Competing interests: None declared.
Provenance and peer review: Commissioned, not externally peer reviewed.

BMJ 2007;335:65-6
doi:10.1136/bmj.39261.657655.47

Venous leg ulcers are painful, malodorous sores that impair quality of life and are difficult to treat.[1] An estimated 5-8% of the world's population have venous disease, and 1% have venous ulcers at some time in their life.[2] The cost to healthcare services is best known for the United Kingdom, where active ulcers affect 1.7% of the elderly population, at a cost to the NHS of around £600m (€880m, $1200m) a year.[3,4] Available evidence suggests costs are high throughout Europe, the United States, and Australia. These ulcers are caused by sustained high venous pressures due to venous disease, obesity, immobility associated with arthritis, or even old age itself.

Compression using four layer bandaging is the mainstay of treatment—it completely heals ulcers in a mean of 7-8 weeks when delivered by trained leg ulcer nurses in the community.[5,6] The efficacy of four layer bandaging is not influenced by the underlying venous abnormality.[7] Whether novel "biologically active" dressings can improve these healing rates remains uncertain, as does the role of venous surgery.

In this week's *BMJ* Gohel and colleagues report the long term results from the ESCHAR trial, which compared compression alone with compression plus superficial venous surgery in patients with open or recently healed leg ulcers and superficial venous incompetence.[8] This trial was adequately powered and reported on ulcer healing, ulcer recurrence, and ulcer-free time over three or four years. Most previous trials either ignored the role of compression therapy or compared surgery with compression, which is inappropriate as both are effective treatments that should be complementary.[3,6,8]

ESCHAR clarifies the role of superficial venous surgery in people willing or able to have an operation.[8] The trial found no significant difference between compression alone and compression plus surgery on ulcer healing at three years—but recurrence, which otherwise happens in a quarter of patients each year, was almost halved. This beneficial effect was most obvious in patients who have incompetence affecting only the superficial veins or those with "segmental" deep venous incompetence, in which reflux is found in limited segments of the deep veins without widespread valve failure. The authors' use of "isolated superficial" where the deep veins are normal, "segmental deep," and "total deep" incompetence is unfortunate as most "segmental deep" incompetence is reflux within the common femoral or popliteal vein emptying into the incompetent long or short saphenous vein; valve failure is largely confined to the superficial veins.[9]

The finding of reduced ulcer recurrence after superficial vein surgery in patients with "total deep" incompetence is surprising as valve failure causes widespread deep venous reflux in such patients. However, early results from the ESCHAR study showed that ablating incompetent superficial veins improves deep venous function.[10] This does not mean that all patients with combined superficial and deep incompetence would benefit from superficial surgery.[7] Preoperative assessment in ESHCAR was by duplex imaging, which describes the anatomy of venous disease but not the function. Ambulatory venous pressures would be a more reliable measure of venous function, with a narrow tourniquet obstructing the superficial veins.[8] Many surgeons do not use ambulatory venous pressure measurement because it requires cannulation of the foot, even though it is the only direct measure of venous pressures.

The encouraging results of surgery on ulcer recurrence rates in the ESCHAR trial will sadly have little influence on overall ulcer prevalence. Patients were recruited from specialist, hospital based leg ulcer clinics, whereas many elderly people in the community refuse to attend hospitals for either venous investigations or surgery.[6,11] Even among the hospital clinic patients screened for ESCHAR, over a third refused to be randomised and a further 20% refused surgery despite consenting to the study.[8] In the community, our experience is that less than half the patients would attend for investigation, and perhaps a third would consider surgery, simple pinch skin grafting being an exception as it can be done in the community by specialist nurses, under local anaesthetic, and speeds the healing of large ulcers.[12]

What does this mean for general practitioners looking after people with leg ulcers? Firstly, people should be referred to a specialist leg ulcer service for investigation of arterial disease before four layer bandaging, if appropriate.

TERAPIA CHIRURGICA delle ULCERE VENOSE

- Si in casi selezionati (indicazione relativa)
- Si sul sistema venoso superficiale
- Attento studio morfologico ed emodinamico
- Sindrome post-trombotica: risultati peggiori

LAVORI SCIENTIFICI - Limiti attuali

- Non dati sulle caratteristiche di pazienti che non guariscono nonostante una terapia conservativa attuale
- Non dati sufficienti su pazienti guariti ma a rischio di recidiva
- “ End Point ”: “ guarigione “ dell’ulcera
- E le recidive a distanza ?

CLASSIFICAZIONE DI LERICHE E FONTAINE

- **I STADIO:** preclinico o subclinico, senza manifestazioni funzionali, evidenziato da un esame clinico sistematico.
- **II STADIO:** claudicatio intermittens, non dolori a riposo, esordio progressivo o acuto.
  - A. intervallo libero > 200 m
  - B. intervallo libero < 200 m
- **III STADIO:** dolori a riposo, arto in posizione antalgica declive, edematoso e/o cianotico.
- **IV STADIO:** lesioni trofiche (gangrene, ulcere).

(Fontaine, Kim, Kieny, 1954 mod.)

ISCHEMIA CRITICA CRONICA

III + IV STADIO di Fontaine
Dolori a riposo ± lesioni trofiche

Jamieson C. et al.: The definition of critical ischaemia of a limb. *Br. J. Surg.* 1982

- "Limb-threatening ischaemia"
- No diabetici
- P. caviglia (Doppler) > 40 mmHg - dolori a riposo
  > 60 mmHg - ulcere,gangrene
- "Critical" = elevata probabilità di perdita d'arto
- Tentativo di rendere più aderente possibile alla realtà clinica il principio di IC critica.

DOLORE ISCHEMICO A RIPOSO

- Dolore severo non controllato da analgesici
- Sede: avampiede, dita, ulcere
- Scatenato o peggiorato dall'elevazione, notturno
- AP < 40 mmHg; TP < 30 mmHg

"NON-HEALING ISCHEMIC ULCER"

Insufficiente perfusione arteriosa ⇒ risposta infiammatoria non adeguata ⇒ no cicatrizzazione.

In caso di Ischemia Critica Cronica l'indicazione alla chirurgia di rivascolarizzazione arteriosa

è assoluta

ULCERE VASCOLARI

- **Terapia topica**
- Correzione dell'ipertensione e della stasi
  - **- Elastocompressione**
  - **- Terapia medica**
  - **- Scleroterapia**
  - **- Chirurgia**
- Rivascolarizzazione arteriosa
- Chirurgia ricostruttiva
- Esercizio fisico programmato
- Riabilitazione vascolare

PRINCIPI FONDAMENTALI

- Diagnosi corretta
- Preparazione del fondo della lesione
- Correzione delle alterazioni emodinamiche
- Strategie preventive della recidiva
- Qualità di vita
- Contenimento dei costi

Tessuto necrotico
Edema
Infezione
Alterazioni emodinamiche

⇓

Sbrigliamento
Antibiotici
Chirurgia

COME ?

Basi razionali della chirurgia

- Lesioni steno-ostruttive su base prevalentemente aterosclerotica
- Clinica correlata all'estensione delle lesioni, allo sviluppo del circolo collaterale ed al coinvolgimento dei punti nodali di rientro

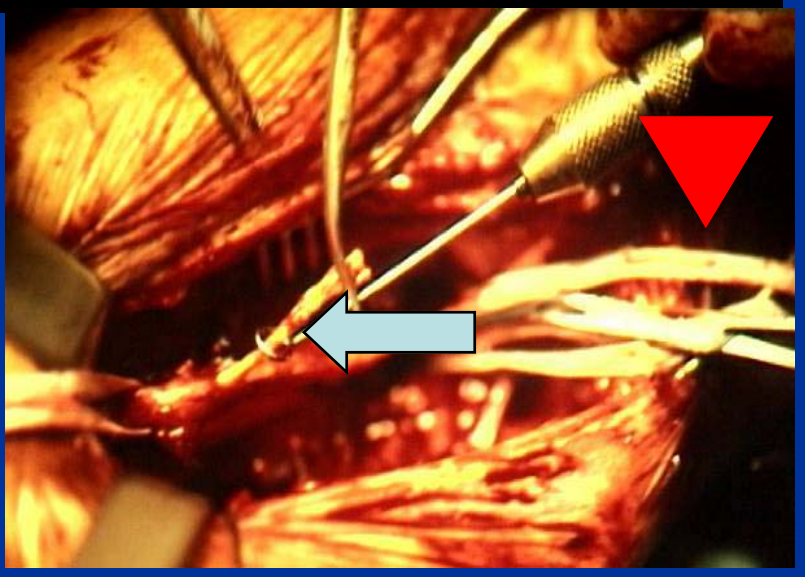
TERAPIA CHIRURGICA delle ULCERE ISCHEMICHE

- Obiettivi:
  - rivascolarizzazione distale
  - riduzione sintomatologia dolorosa
  - controllo infezioni (gangrena umida)
  - riparazione delle lesioni
  - contenimento della perdita di sostanza
  - riduzione dei livelli di amputazione

Chirurgia di rivascolarizzazione arteriosa

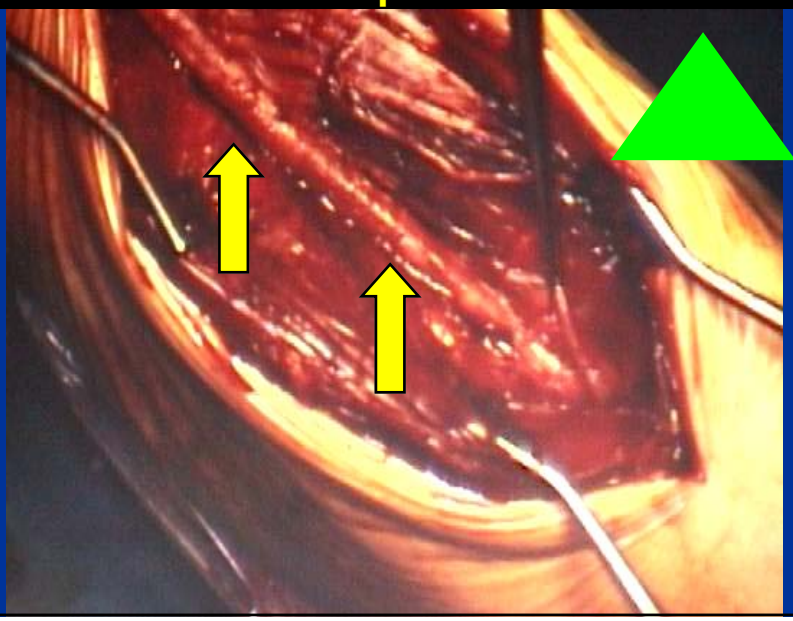
- **Tromboendoarteriectomia (TEA)**
- **Bypass**
- **Chirurgia Endovascolare**
- **Simpaticectomia**
- **Spinal Cord Stimulation (SCS)**

TEA femoro-poplitea

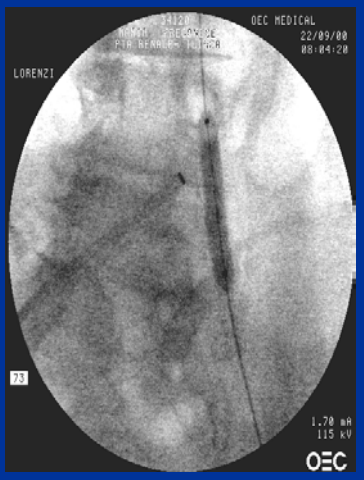


Bypass femoro-distale
in vena grande safena “in situ”

Bypass femoro-distale
in bioprotesi



CHIRURGIA ENDOVASCOLARE

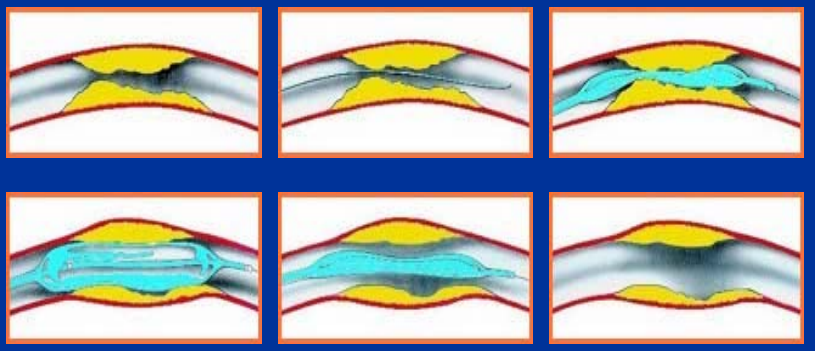


- MINI-INVASIVITA'
- ELEVATA PERCENTUALE DI SUCCESSI TECNICI
- ALTA PERVIETA' A DISTANZA
- BASSA INCIDENZA DI COMPLICANZE
- RIDUZIONE TEMPI DI DEGENZA
- POSSIBILITA' DI ASSOCIAZIONE CON LA CHIRURGIA VASCOLARE CONVENZIONALE

CHIRURGIA ENDOVASCOLARE

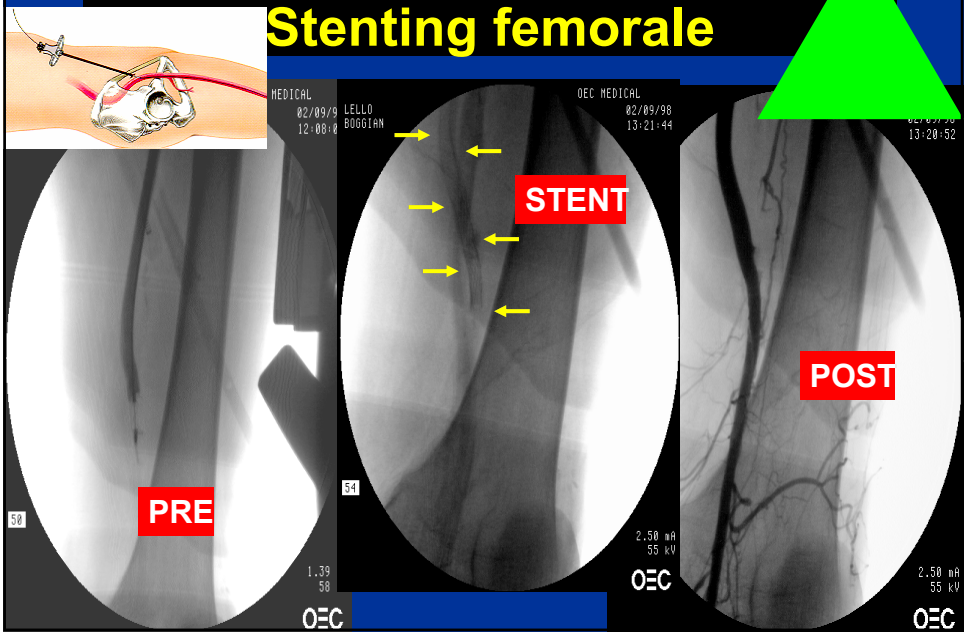
- PTA
- STENTING
- LASER ANGIOPLASTICA
- ENDOPROTESI
- ATERECTOMIA
- TROMBOLISI

ANGIOPLASTICA PERCUTANEA TRANSLUMINALE



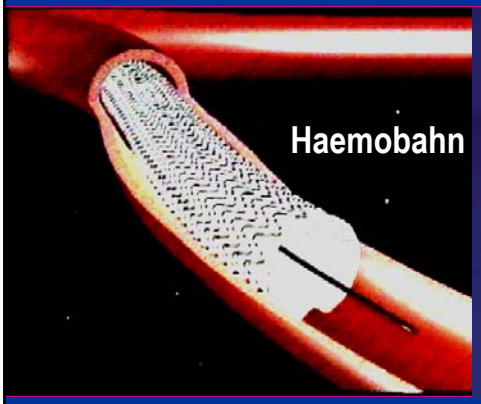
STIRAMENTO FIBRE ELASTICHE E CELLULE MUSCOLARI LISCE
FRATTURA LONGITUDINALE DELLE TUNICHE INTERNE AMMALATE
SPOSTAMENTO MATERIALE ATEROMASICO
RIPARAZIONE FIBROSA
FORMAZIONE STRATO NEO-INTIMALE

Chirurgia endovascolare
Stenting femorale



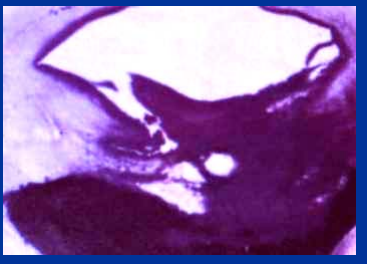
CHIRURGIA ENDOVASCOLARE

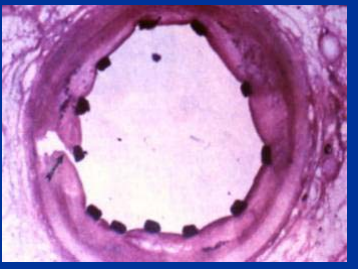
Endoprotesi

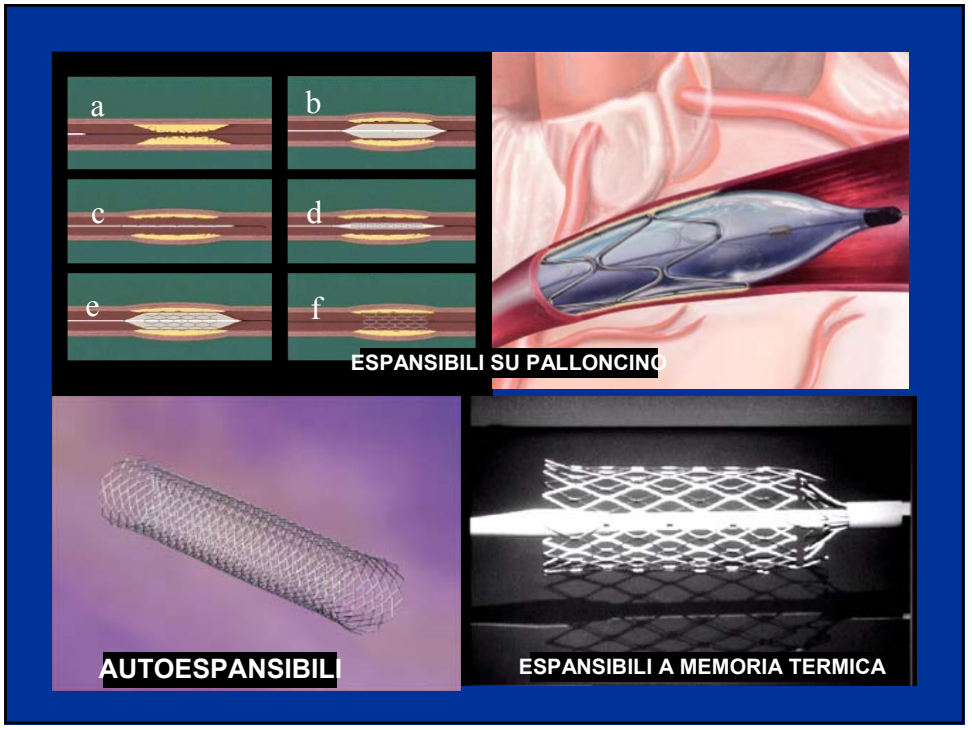


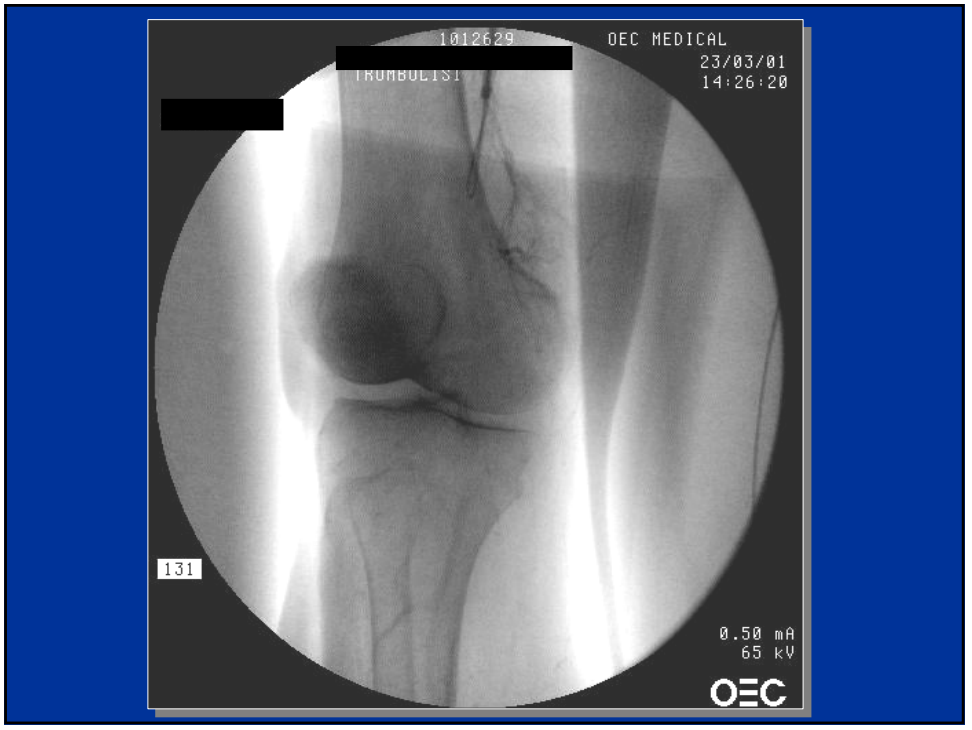
CHIRURGIA ENDOVASCOLARE

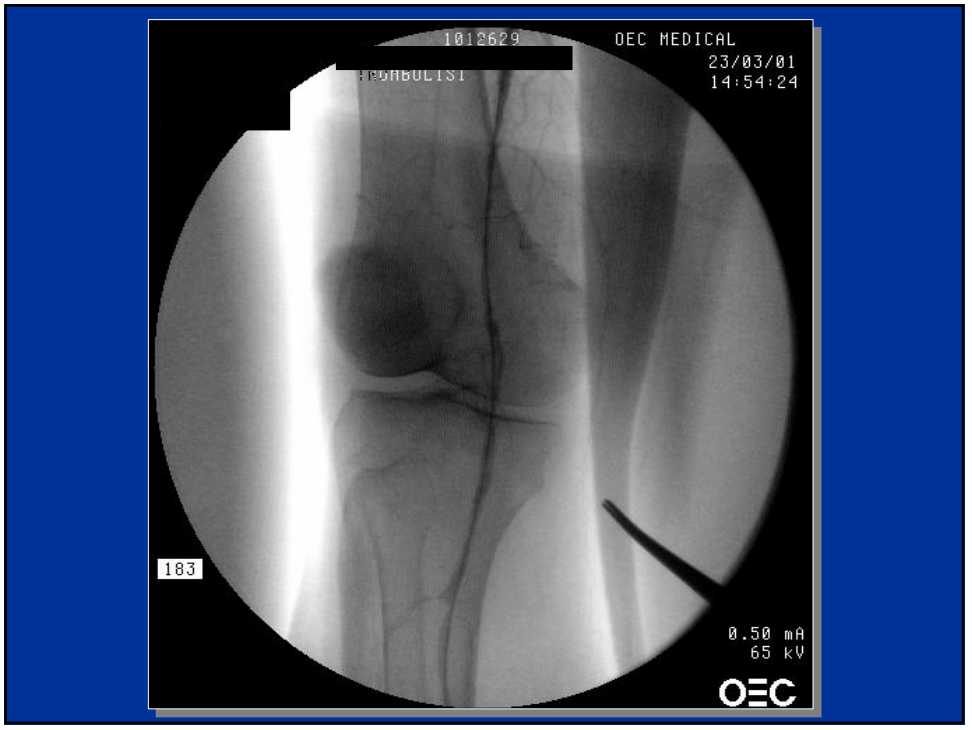
- **STENTING**
  - **STABILIZZA LA PLACCA**
  - **PREVIENE RITORNO ELASTICO**
  - **PREVIENE EMBOLIZZAZIONE DI MATERIALE**

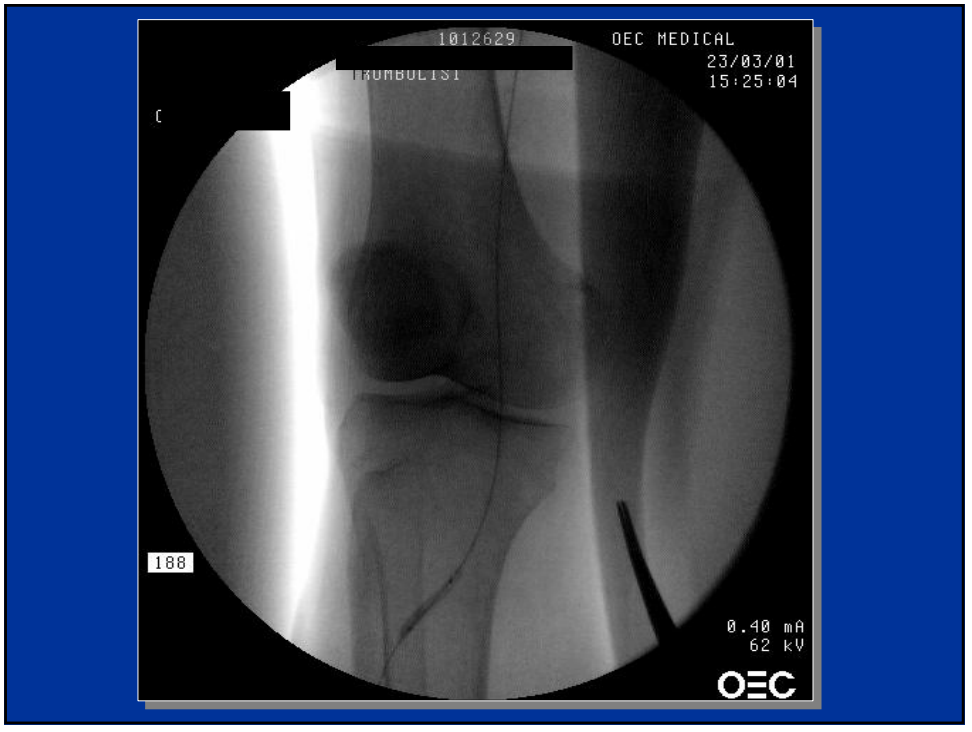


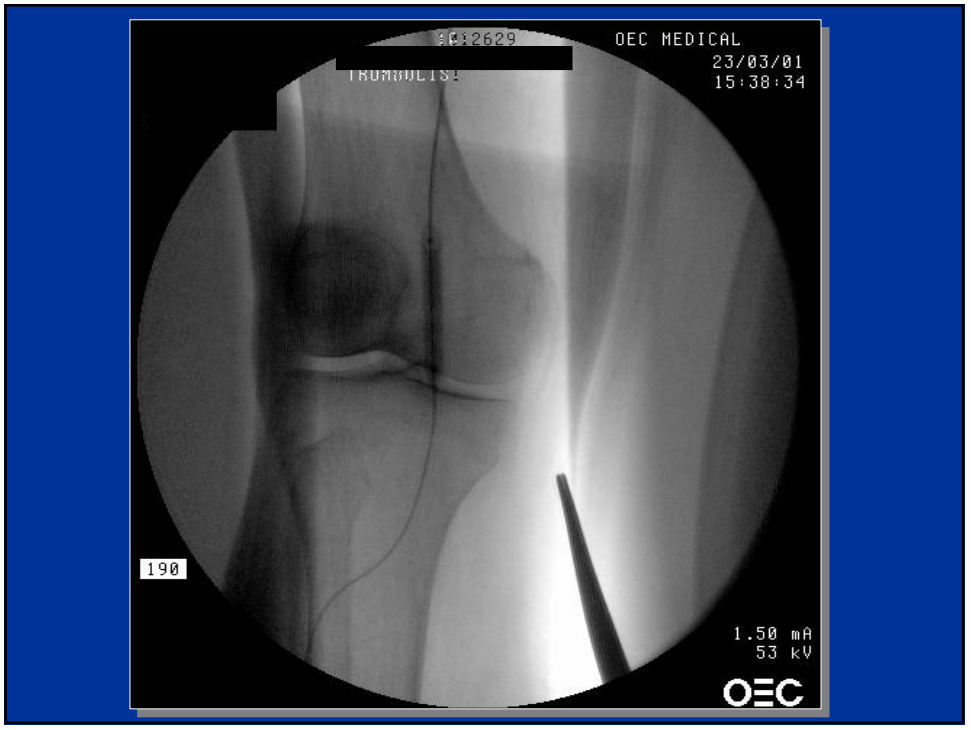


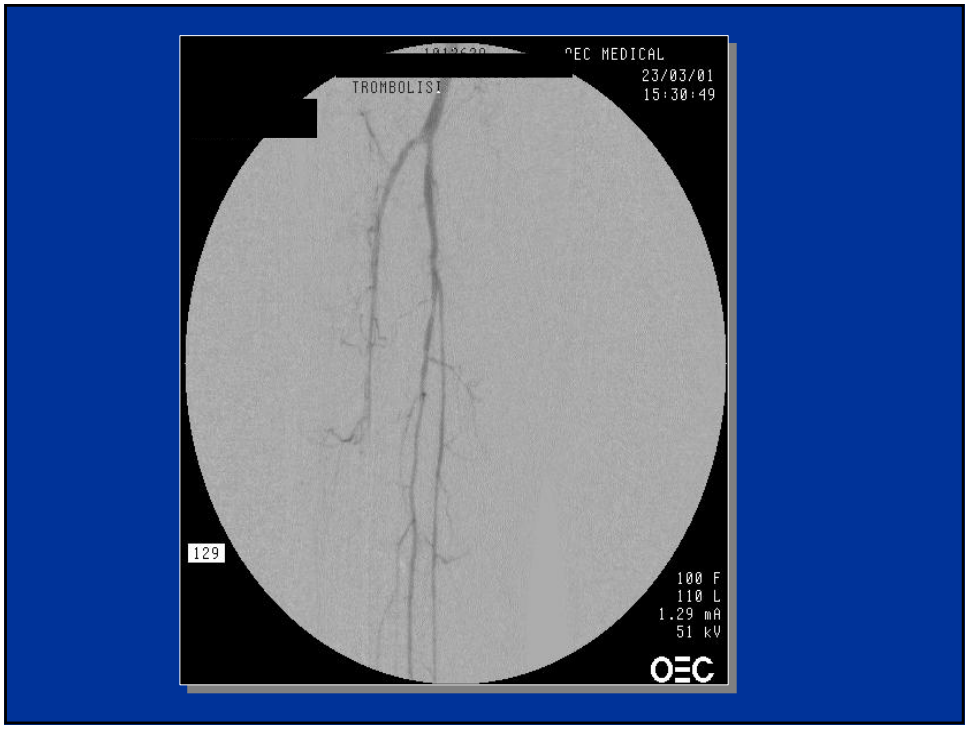

a
b
c
d
e
f
ESPANSIBILI SU PALLONCINO
AUTOESPANSIBILI
ESPANSIBILI A MEMORIA TERMICA


1012629
OEC MEDICAL
23/03/01
14:26:20
131
0.50 mA
65 kV
OEC

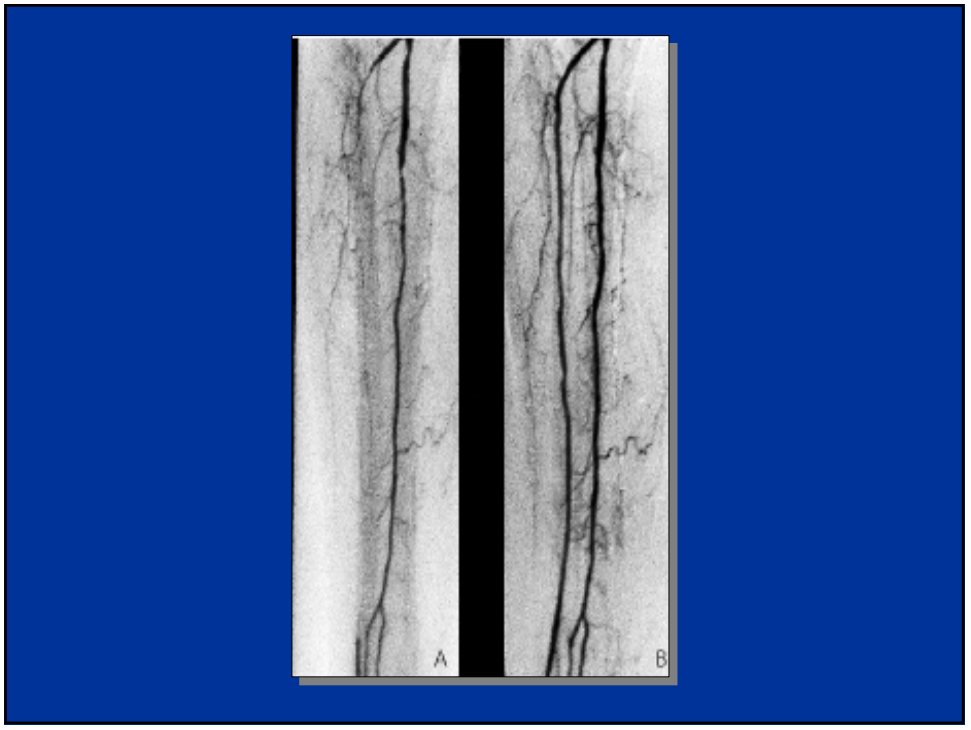

1012629
OEC MEDICAL
23/03/01
14:54:24
183
0.50 mA
65 kV
OEC


1012629
OEC MEDICAL
23/03/01
15:25:04
188
0.40 mA
62 kV
OEC


OEC MEDICAL
23/03/01
15:38:34
190
1.50 mA
53 kV
OEC


OEC MEDICAL
23/03/01
15:30:49
TROMBOLISI
129
100 F
110 L
1.29 mA
51 kV
OEC


1012629
OEC MEDICAL
TROMBOLISI
23/03/01
15:39:58
15
1.50 mA
54 kV
OEC


A
B

La nostra esperienza

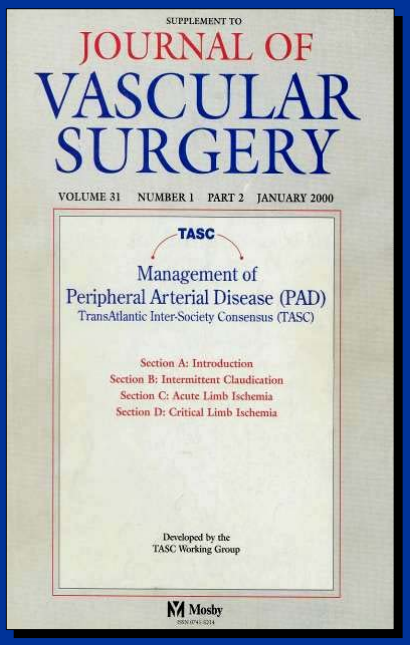
- Stima su ultimi 70 casi di Bypass femoro-distale
- Follow up → 36 mesi

Risultati

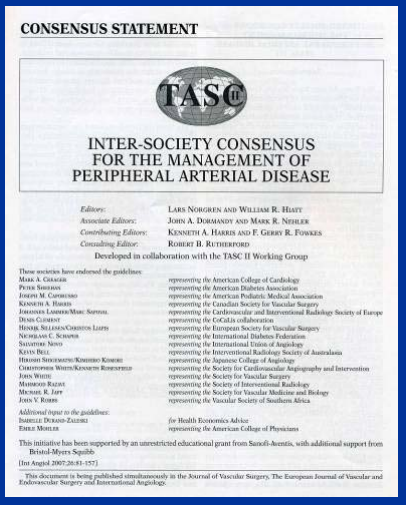
- Pervietà primaria: 74.3% dei pontaggi venosi
  23% di protesi alloplastiche
- Salvataggio d'arto: 83.7% con buon run off
  51.8% con un solo

Endovascolare

- Tecniche endovascolari nel distretto popliteo-tibiale in corso di validazione.
- Successo tecnico → 90%
- Salvataggio d'arto a 2 anni: 52-86%
- Pervietà a 5 anni: 50-60% se run off accettabile



2007



CONSENSUS STATEMENT

TASC II

INTER-SOCIETY CONSENSUS
FOR THE MANAGEMENT OF
PERIPHERAL ARTERIAL DISEASE

Editors: LARS NORGREN AND WILLIAM R. HIATT
Associate Editors: JOHN A. DORMANDY AND MARK R. NEHLER
Contributing Editors: KENNETH A. HARRIS AND F. GERRY R. FOWKES
Consulting Editor: ROBERT B. RUTHERFORD

Developed in collaboration with the TASC II Working Group

These societies have endorsed the guidelines:

MARK A. CREAGER	representing the American College of Cardiology
PETER SHERIDAN	representing the American Diabetes Association
JOSEPH M. CAPORUSSO	representing the American Podiatric Medical Association
KENNETH A. FISHER	representing the Canadian Society for Vascular Surgery
JOHANNES LAMMER/MARC SIRTORI	representing the Cardiovascular and Interventional Radiology Society of Europe
DENIS CLEMENT	representing the CoCaDa collaboration
HENRIK SILLESEN/CHRISTOS LIAPIS	representing the European Society for Vascular Surgery
NICHOLAS C. SCHOFIELD	representing the International Diabetes Federation
SALVATORE MINO	representing the International Union of Angiology
KEVIN BELL	representing the Interventional Radiology Society of Australasia
HIROSHI SHIGEMATSU/KIMIHIKO KICHIKI	representing the Japanese College of Angiology
CHRISTOPHER WHITE/KENNETH ROSENFIELD	representing the Society for Cardiovascular Angiography and Intervention
JOHN WHITE	representing the Society for Vascular Surgery
MAHMOOD RAZAVI	representing the Society of Interventional Radiology
MICHAEL R. JAFF	representing the Society for Vascular Medicine and Biology
JOHN V. ROBERS	representing the Vascular Society of Southern Africa

Additional Input to the guidelines:

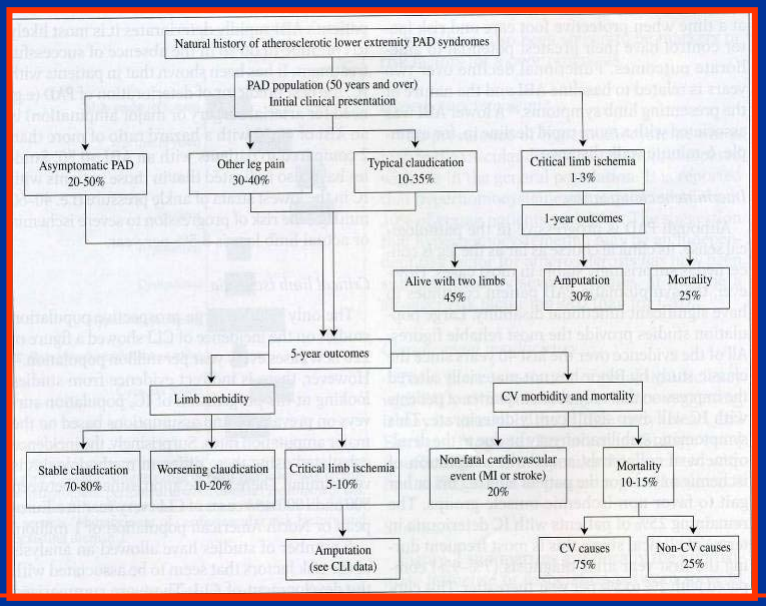
ISABELLE DURAND-ZALESKI	for Health Economics Advice
EMILE MOHLER	representing the American College of Physicians

This initiative has been supported by an unrestricted educational grant from Sanofi-Aventis, with additional support from Bristol-Myers Squibb

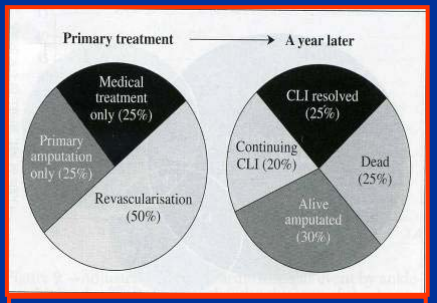
[Int Angiol 2007;26:81-157]

This document is being published simultaneously in the Journal of Vascular Surgery, The European Journal of Vascular and Endovascular Surgery and International Angiology.

TASSO DI AMPUTAZIONE

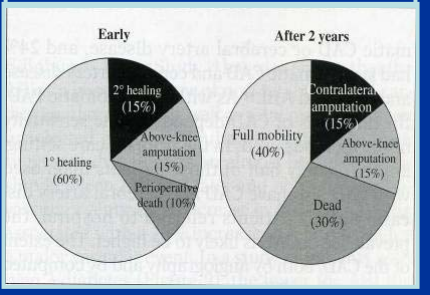


Storia naturale di pz con claudicatio a 5 anni

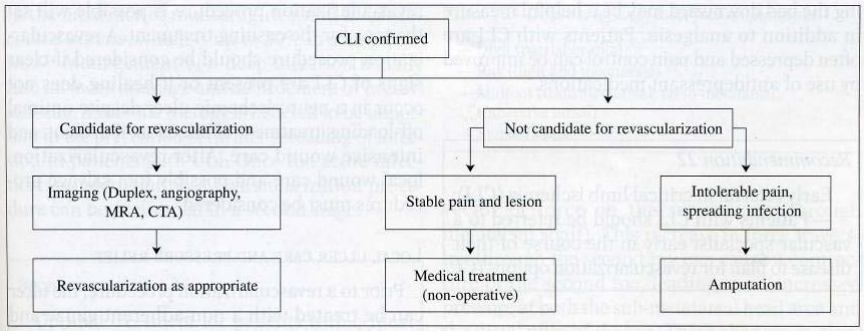


Storia naturale di pz con ICC

Storia naturale di pz amputato di gamba



Algoritmo per il trattamento di ICC



Recommendation 22

Early referral in critical limb ischemia (CLI):
— Patients with CLI should be referred to a vascular specialist early in the course of their disease to plan for revascularization options [C].

Recommendation 23

Multidisciplinary approach to treatment of critical limb ischemia:
— A multidisciplinary approach is optimal to control pain, cardiovascular risk factors and other co-morbid disease [C].

Recommendation 24

Optimal treatment for patients with critical limb ischemia (CLI):

— Revascularization is the optimal treatment for patients with CLI [B].

Recommendation 26

Multidisciplinary care in critical limb ischemia (CLI):

— Patients with CLI who develop foot ulceration require multidisciplinary care to avoid limb loss [C].

Recommendation 27

Amputation decisions in critical limb ischemia (CLI):

— The decision to amputate and the choice of the level should take into consideration the potential for healing, rehabilitation and return of quality of life [C].

Bypass surgery for chronic lower limb ischaemia (Review)

Leng GC, Davis M, Baker D

THE COCHRANE COLLABORATION®

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2007, Issue 3

http://www.thecochranelibrary.com

WILEY Publishers Since 1807

ABSTRACT

Background

Surgical bypass of an occluded arterial segment is the mainstay of treatment for patients with critical limb ischaemia. As with many surgical interventions, however, it was introduced without formal evaluation.

Objectives

The objective of this review was to determine the effects of bypass surgery in patients with chronic lower limb ischaemia.

Search strategy

The reviewers searched the Cochrane Peripheral Vascular Diseases Group trials register, MEDLINE, EMBASE, reference lists of relevant articles, and contacted principal trial investigators.

Selection criteria

Authors' conclusions

There is limited evidence for the effectiveness of bypass surgery and further large trials are required.

trials involved a total of just over 700 patients, two trials comparing bypass surgery with angioplasty (PTA), and one with each of thromboendarterectomy, thrombolysis, exercise, and spinal cord stimulation. Four trials included patients with a range of disease severity (intermittent claudication and critical limb ischaemia), one was restricted to claudicants only and another to only critical limb ischaemia. The type of bypass procedure performed in each trial was similar: vein grafts for distal reconstructions; synthetic prostheses for aorto-iliac or ilio-femoral bypasses. The outcome measures varied, but four of the six trials included mortality and operative failure. In general the quality of the trials was good, but none was blinded because of the nature of the intervention.

There were no clear differences between bypass surgery and PTA. Mortality and amputation rates did not differ significantly, although primary patency was significantly higher in the bypass group after 12 months (Peto OR 1.6, 95% CI 1.0, 2.6) but not after four years (p=0.14). Compared with thrombolysis, amputation rates were significantly lower in the bypass group (Peto OR 0.2, 95% CI 0.1, 0.6), but mortality rates did not differ. Compared with thromboendarterectomy, restoration of blood flow was significantly greater in the bypass patients (Peto OR 9.2, 95% CI 1.7, 50.6), but mortality and amputation rates did not differ. Bypass did not differ significantly from exercise or spinal cord stimulation.

Authors' conclusions

There is limited evidence for the effectiveness of bypass surgery and further large trials are required.

Natural history of limbs with arterial insufficiency and chronic ulceration treated without revascularization

William A. Marston, MD, Stephen W. Davies, BS, Brian Armstrong, BS, Mark A. Farber, MD, Robert C. Mendes, MD, Joseph J. Fulton, MD, and **Blair A. Keagy, MD,** *Chapel Hill, NC*

Objectives: The natural history of limbs affected by ischemic ulceration is poorly understood. In this report, we describe the outcome of limbs with stable chronic leg ulcers and arterial insufficiency that were treated with wound-healing techniques in patients who were not candidates for revascularization.

Methods: A prospectively maintained database of limb ulcers treated at a comprehensive wound center was used to identify patients with arterial insufficiency, defined as an ankle-brachial index (ABI) <0.7 or a toe pressure <50 mm Hg. Patients were treated without revascularization when medical comorbidity or anatomic considerations did not allow revascularization with acceptable risk. Ulcers were treated with a protocol emphasizing pressure relief, débridement, infection control, and moist wound healing. Risk factors analyzed for their affect on healing and amputation risk included age, gender, diabetes mellitus, chronic renal insufficiency (serum creatinine > 2.5 mg/dL), severity of ischemia measured by ABI or toe pressure, wound grade, wound size, and wound location.

Results: Between January 1999 and March 2005, 142 patients with 169 limbs having arterial insufficiency and full-thickness ulceration were treated without revascularization. Mean patient age was 70.8 ± 4.5. Diabetes mellitus was present in 70.4% of limbs and chronic renal insufficiency in 27.8%. Toe amputations or other foot-sparing procedures were performed in 28% of limbs. Overall, limb loss occurred in 37 patients. By life-table analysis, 19% of limbs required amputation ≤6 months of initial treatment and 23% at 12 months. Complete wound closure was achieved in 25% by 6 months and in 52% by 12 months. Statistical analysis showed a correlation between ABI and the risk of limb loss. In patients with an ABI <0.5, 28% and 34% of limbs experienced limb loss at 6 and 12 months, respectively, compared with 10% and 15% of limbs in patients with an ABI >0.5 ($P = .01$). The only risk factor associated with wound closure was initial wound size ($P < .005$).

Conclusions: Limb salvage can be achieved in most patients with arterial insufficiency and uncomplicated chronic nonhealing limb ulcers using a program of wound management without revascularization. Healing proceeds slowly, however, requiring more than a year in many cases. Patients with an ABI <0.5 are more likely to require amputation. Interventions designed to improve outcomes in critical limb ischemia should stratify outcomes based on hemodynamic data and should include a comparative control group given the natural history of ischemic ulcers treated in a dedicated wound program. (J Vasc Surg 2006;44:108-14.)

REVIEW

Complete Ulcer Healing as Primary Endpoint in Studies on Critical Limb Ischemia? A Critical Reappraisal

U. Hoffmann,[1*] K.-L. Schulte,[2] H. Heidrich,[3] H. Rieger[4] and S. Schellong[5]

[1]*Division of Angiology, Ludwig-Maximilians-University Hospital Munich, Germany,*
[2]*Vascular Center Berlin, Ev. Hospital KEH, Academic Teaching Hospital of the Charité, Germany,*
[3]*Formerly Franziskus Hospital, Berlin, Academic Teaching Hospital of the Charité, Germany,*
[4]*Formerly Aggertal Hospital, Engelskirchen, Germany, and*
[5]*Division of Angiology, University Hospital Carl Gustav Carus, Dresden, Germany*

Objectives. *Although complete ulcer healing is the mandatory primary efficacy criterion in current European guidelines for drug trials in critical limb ischemia (CLI), the appropriateness of this endpoint has been questioned for some time. We carried out a systematic review to assess the value of this endpoint in studies on reconstructive measures, considered to be the standard of care for CLI.*
Methods. *A computerized literature search (1985–2005) was performed to track down clinical studies on endovascular and surgical interventions by using the search terms* CLI *and* ulcer healing *and their synonyms.*
Results. *1,914 papers on revascularization in CLI were identified. Complete ulcer healing was reported in 17 studies (0.9%). Among these, there were no randomized controlled trials, five prospective cohorts on endovascular procedures, and six retrospective cohorts for endovascular and surgical procedures, respectively. If healing rates or time to ulcer healing were available, they differed greatly between the studies without consistent correlation to types of therapy.*
Conclusions. *In past and current literature, complete ulcer healing is not a consistently reported criterion for success of revascularization in CLI. Thus, its appropriateness for efficacy assessment of drug studies in CLI patients has to be questioned.*

CHI ?

→ Chirurgo Vascolare

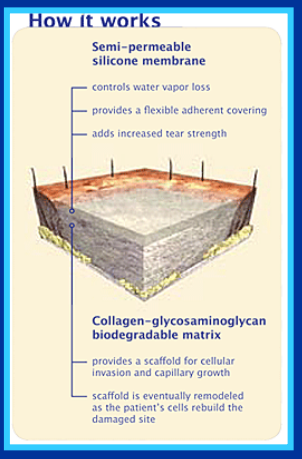
→ Radiologo Interventista

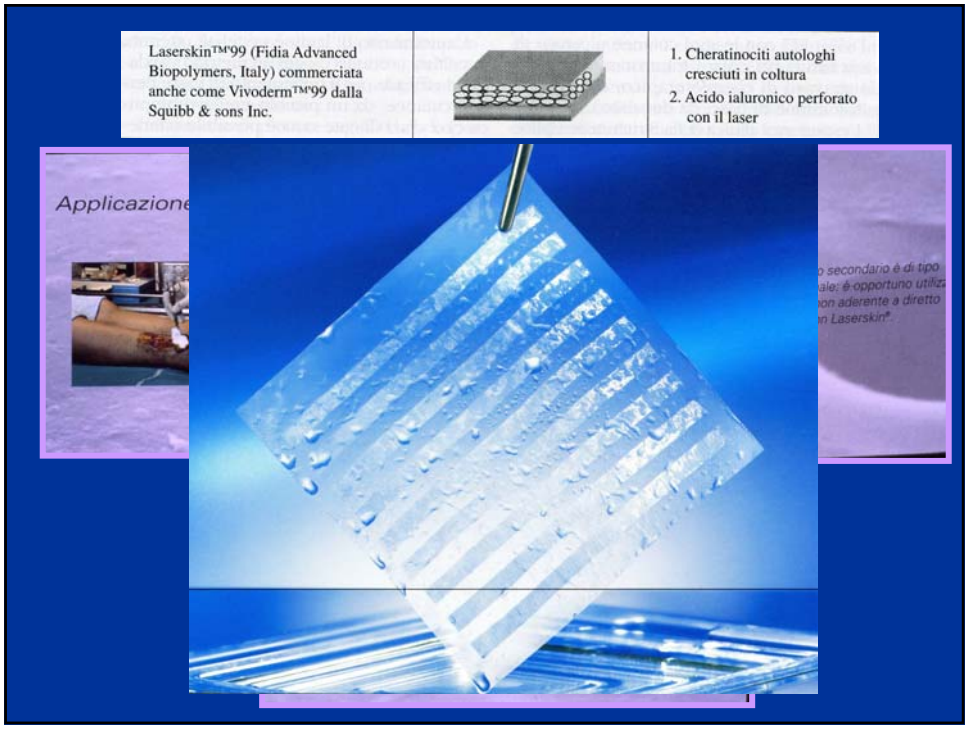
→ Cardiologo Emodinamista

Chirurgia riparativa - rigenerativa

- Innesti cutanei (omologhi, autologhi)
- Sostituti dermici
- Cute ingegnerizzata
- Cellule staminali
- ...

Integra®'ae(Integra Life Science Corporation, Plainsboro, New Jersey)		1. Silicone 2. Collagene e glico-saminoglicani





PROBLEMI APERTI

Trials clinici randomizzati per lo studio della terapia chirurgica delle ulcere

Quante u. possono guarire col solo trattamento conservativo ?
La chirurgia ha un ruolo sia nell'incrementare le guarigioni dove la terapia è fallita sia nel prevenire le recidive ?

Come confrontare le tecniche di chirurgia vascolare con la chirurgia locale dell'ulcera ?
Quali e quanti pazienti richiederanno un ricovero ad un dato momento del proprio programma terapeutico ?

Conclusioni

Fondamentale l'aspetto profilattico, preventivo e la precocità del percorso diagnostico-terapeutico

"...nell'a ando si
dovrebbe si quando
occorrer terapia
qu ..."

M. Bartolo 1931

"Confidian speranza
di una cur sca il male
con un trat ad allora la
chirurgia conti ro sicuramente
efficace sa mputazione
che signif inarsi alla
morte di un a alla quale
tuttora do entire per
salvare la vita e bili sofferenze"

E. Malan

E. Malan, 1949

Sfida aperta ed estrema

SUPERARE

Incomunicabilità

Incomprensione

TEAM

Together

Everyone

Achieve

More


DH 621 KR