Primary Care Update on Vascular Disease

Mr Gary D Maytham MPhil FRCS
Consultant Vascular and Endovascular Surgeon
St George's Vascular Institute, London

North Downs Hospital, Caterham

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Primary Care Update

4 main areas

- Aneurysmal Disease
- Carotid Disease
- Peripheral Arterial Disease
- Leg Ulcers

Primary Care Update

4 main areas

Aneurysmal Disease

Carotid Disease

Peripheral Arterial Disease

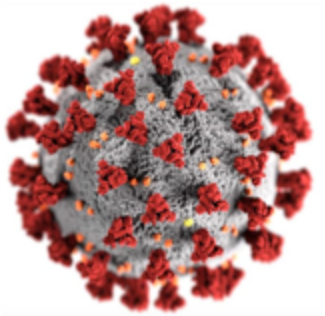
Leg Ulcers

Current Practice

Effect of Covid 19

Likely recovery phase

Background - COVID 19



First wave:

Unprepared for rapid escalation
Increased demand for ITU / ventilator capacity managed by real time surge
Loss of access to ITU beds
Loss of theatre capacity due to ventilator requirement
Loss of staff due to redeployment

Mortality of 40% in vascular patients contracting Covid 19

Up to 50% of hospitalized vascular patients infected

Only life / limb saving procedures undertaken

Priority 1a	Emergency operation needed within 24 hours • Vascular injury/ occlusion (Limb - including compartment syndrome, mesenteric occlusion & AV fistula) • Uncontrolled external haemorrhage - any site/source • Ruptured AAA • Surgical revascularisation (embolectomy/bypass) • IR Thrombolysis for acute ischaemia • Septic / diabetic foot
Priority 1b	Urgent operation needed within 72 hours • Acute on chronic limb ischaemia • Surgical revascularisation (embolectomy/bypass) • Symptomatic carotid disease • Amputation for limb ischaemia • DVT thrombolysis for phlegmasia or end organ failure (renal/hepatic)
Priority 2	Surgery that can be deferred for up to 4 weeks • Chronic severe limb ischaemia - no neurology • Some larger AAAs • Ongoing diabetic foot surgery
Priority 3	Surgery that can sometimes be delayed for up to 3 months • AAA >5.5cm (*ideally within 8 weeks*) • Vascular access surgery
Priority 4	Surgery that can usually be delayed for more than 3 months • Vein surgery • AVMs without complications • Thoracic outlet syndrome • Claudication

Patient Prioritisation

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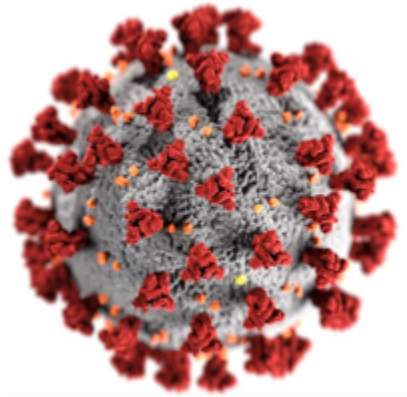
Patient Prioritisation

Additional issues



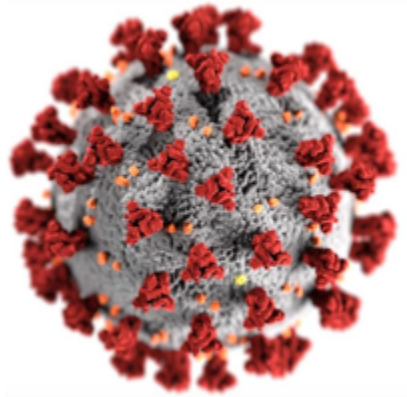
Patient reticence to seek treatment

Covid 19 results in hypercoagulable state

Stock replenishment affected

Consultant staff infections / isolations

Initial recovery



Return to management of urgent cases

Emergency clinics

Urgent Diabetic Foot Clinics

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Patient Prioritisation

Abdominal Aortic Aneurysms

Focal dilatation of abdominal aorta at least 50% larger than normal

Most commonly fusiform

Primarily affect population older than 50 years

- 5% of elderly population > 60 years old

2 to 6 times more common in men

- Men – peak incidence 80 yrs
- Women - onset and peak incidence later

AAA Risk factors

Age

Gender

Smoking

Familial clustering:

15 - 25% undergoing AAA repair - first degree relative with AAA
(2 to 3% age matched control patients without AAA)

Hypertension / hypercholesterolaemia / PVD / CAD

AAA Rupture Risk

AAA Diameter (cm)	12 month rupture risk (%)
3.0 – 3.9	0.3
4.0 – 4.9	0.5 – 1.5
5.0 – 5.9	1 - 11
6.0 – 6.9	11 - 22
> 7	> 30

AAA Screening programme

Screening for AAA is offered to men during the year they turn 65

1 in 92 men who are screened have an abdominal aortic aneurysm

Aorta < 3cm wide	No treatment or monitoring is needed
Aorta 3cm to 4.4cm	Annual Surveillance
Aorta 4.5cm to 5.4cm	3 monthly ultrasound scans
Aorta > 5.5cm	Treatment threshold reached

1 /1000 screened will have reached threshold

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Aorta 3cm to 4.4cm liance

Aorta 4.5cm t nthly ultrasound scans

A Treatment threshold reached

1 / creened will have reached threshold

SUSPENDED

Medical Management

Smoking Cessation

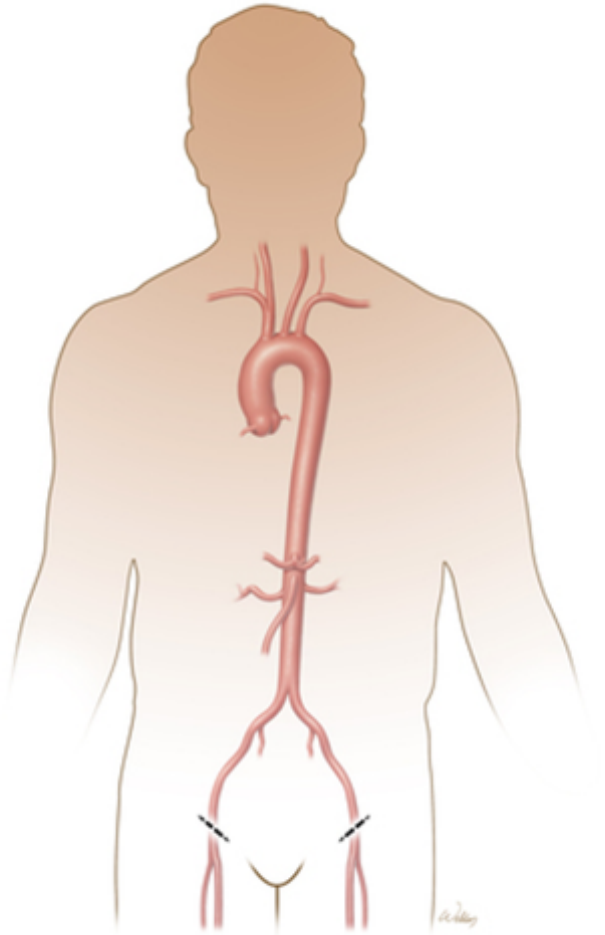
Control of hypertension

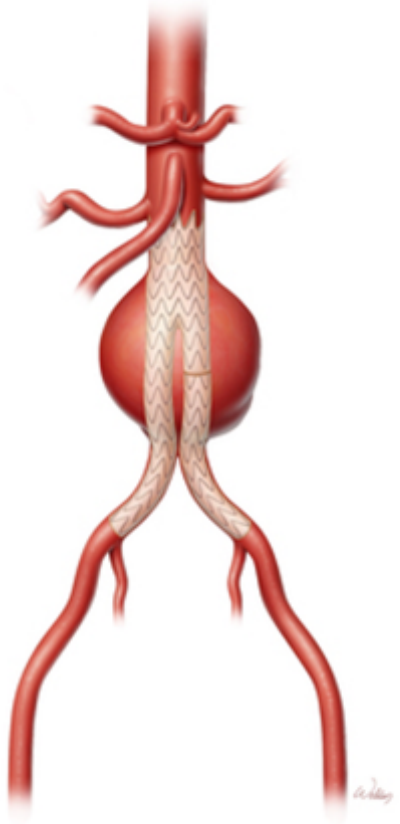
Statins

Systematic review and meta-analysis of 22 studies involving more than 80 000 patients demonstrated an association between statin use and lower AAA growth, rupture rate, and elective perioperative mortality

- J Am Heart Assoc . 2018 Oct 2;7(19)

Current treatment





Recovery phase

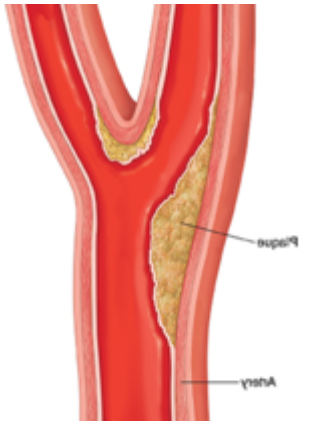
Vascular Society and GIRFT advice is for units to prioritise:

- Larger AAAs over smaller ones
- If equivalent in size, those AAAs that have waited longest
- Screened and unscreened AAA patients should have equal urgency

GP referrals should continue as usual

Resumption of screening

Carotid Artery Disease



Definitions

Stroke: Focal, occasionally global, loss of neurological function lasting > 24 hours or leading to death

TIA: Focal loss of neurological function lasting < 24 hrs

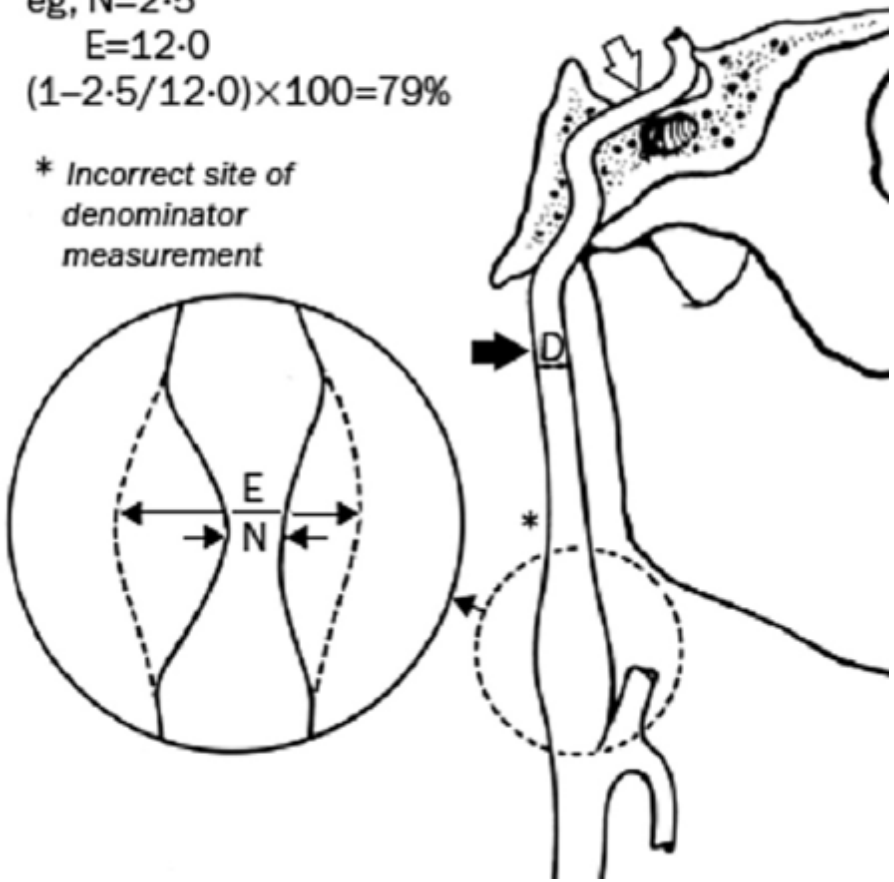
MRI shown TIA patients may have evidence of acute infarction

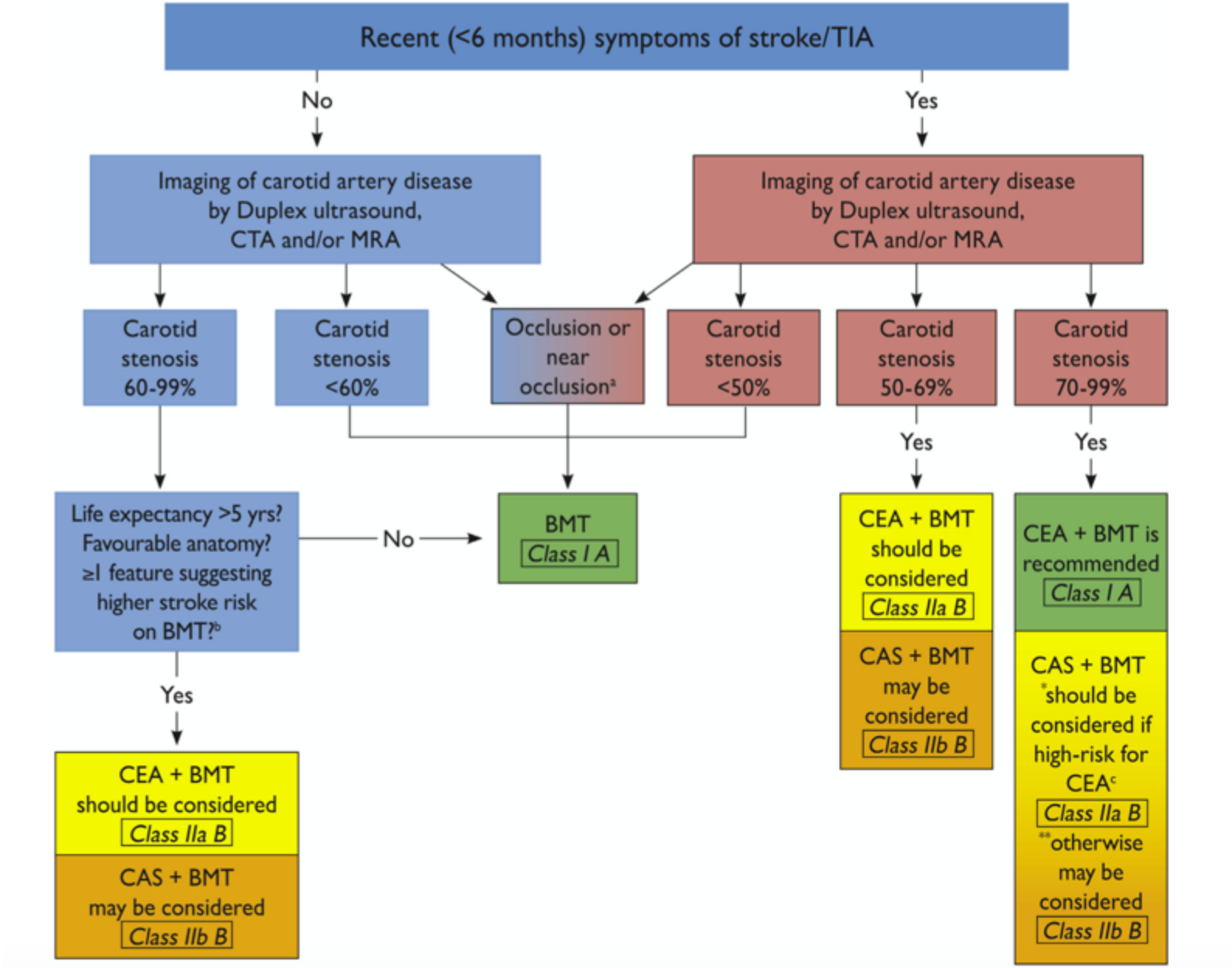
TIA: brief episode of neurologic dysfunction resulting from focal temporary cerebral ischaemia, which is not associated with acute cerebral infarction

Investigation

Method used in ECST
(1–N/E)×100=% stenosis
eg, N=2·5
E=12·0
(1–2·5/12·0)×100=79%

* *Incorrect site of denominator measurement*




Recent (<6 months) symptoms of stroke/TIA
No
Yes
Imaging of carotid artery disease by Duplex ultrasound, CTA and/or MRA
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Carotid stenosis 60-99%
Carotid stenosis <60%
Occlusion or near occlusion[a]
Carotid stenosis <50%
Carotid stenosis 50-69%
Carotid stenosis 70-99%
Yes
Yes
Life expectancy >5 yrs? Favourable anatomy? ≥1 feature suggesting higher stroke risk on BMT?[b]
No
BMT
Class I A
CEA + BMT should be considered
Class IIa B
CAS + BMT may be considered
Class IIb B
CEA + BMT is recommended
Class I A
CAS + BMT
*should be considered if high-risk for CEA[c]
Class IIa B
**otherwise may be considered
Class IIb B
Yes
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Class IIa B
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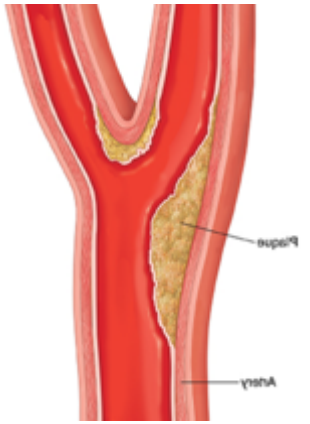
Class IIb B

Current situation



Patients assessed on a patient by patient basis

Lean towards dual antiplatelet therapy in less severe stenoses

Referral patterns are unaffected

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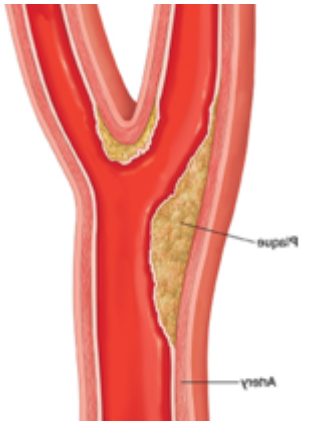
Asymptomatic patients



Healthy diet, smoking cessation and physical activity

Low dose aspirin + statin for secondary prevention of cardiovascular events

Blood pressure < 140 / 90 in hypertensive patients

Strict glycaemic control in diabetic patients

Peripheral Vascular Disease Definitions

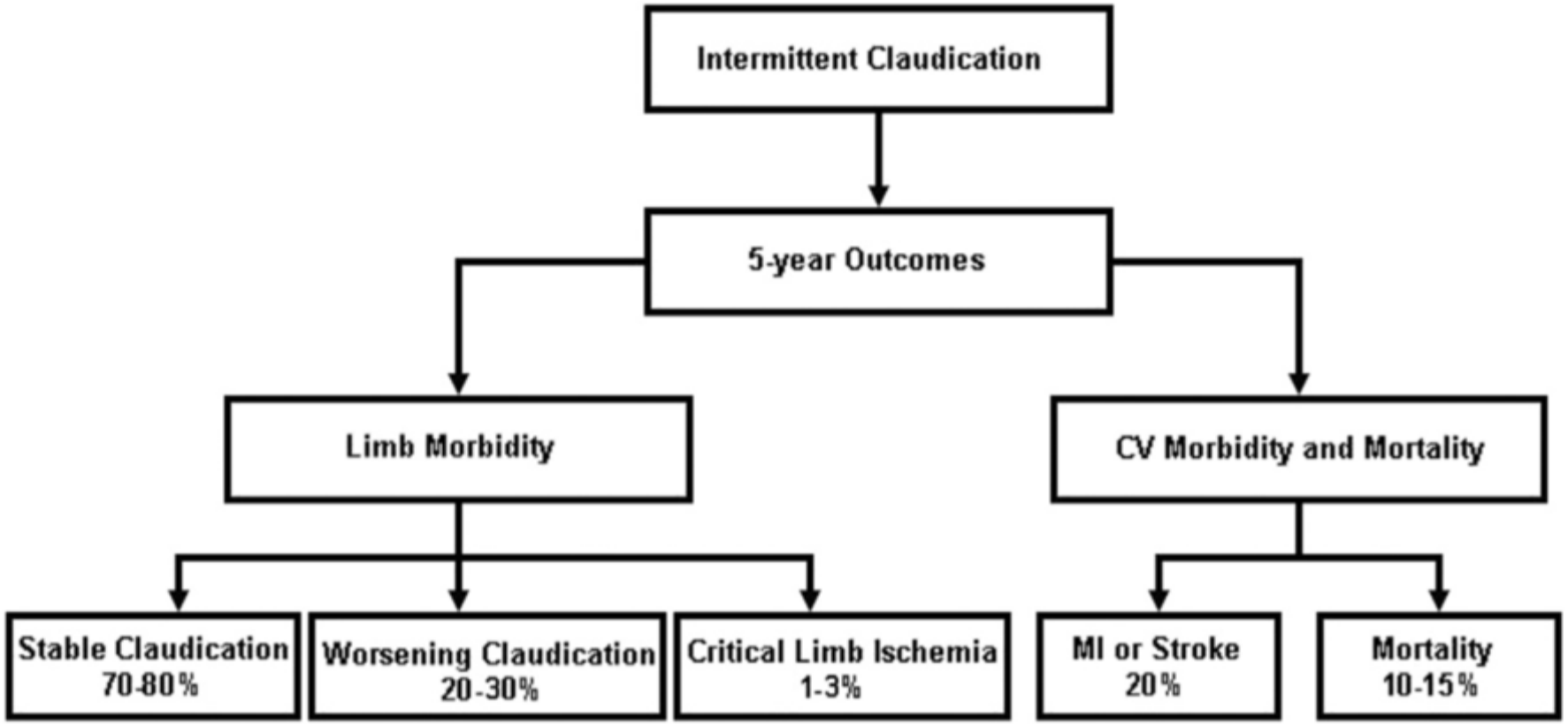
Acute ischaemia: severe hypoperfusion of the limb

Chronic ischaemia:

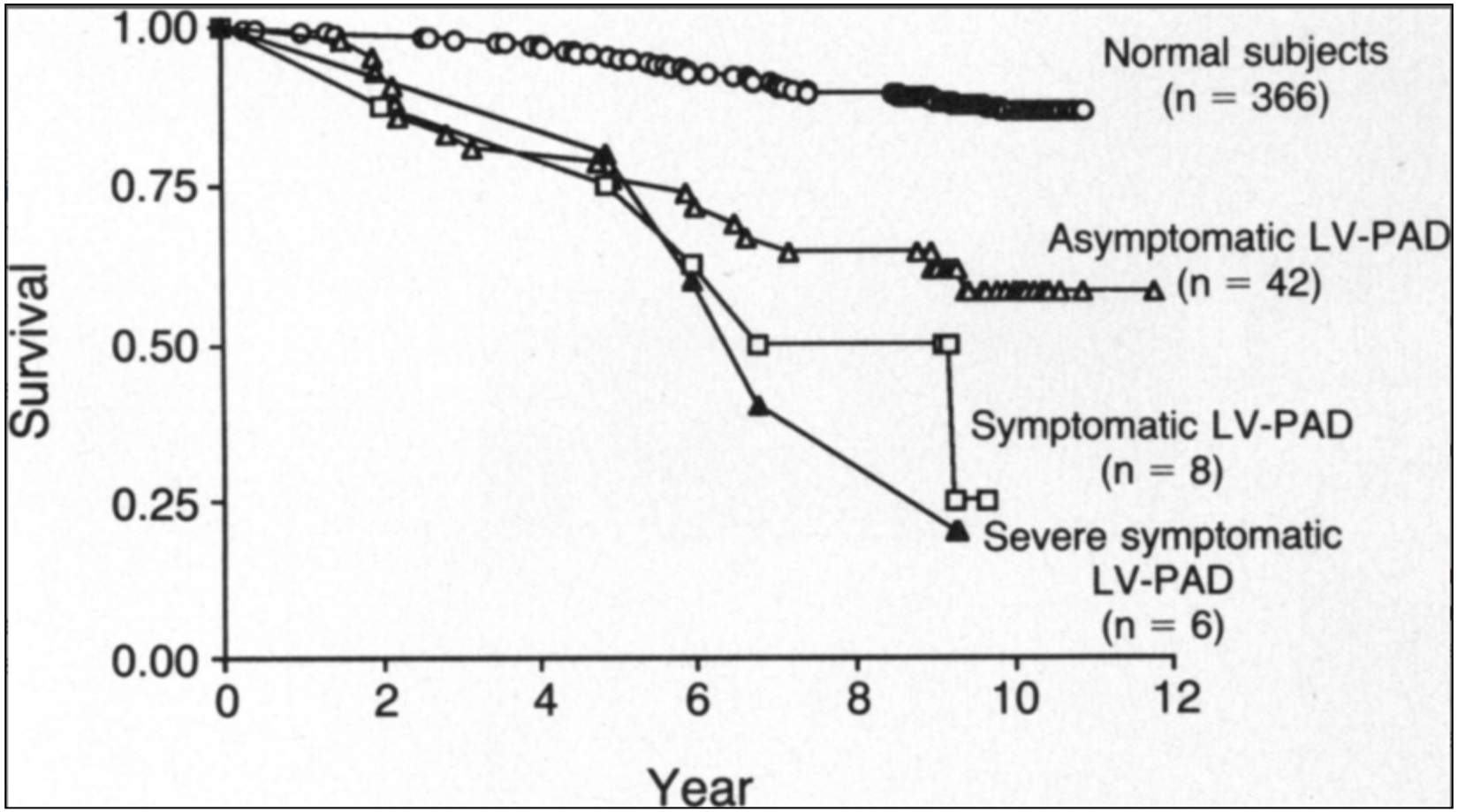
Claudication: *Reproducible discomfort in a specific muscle group that is induced by exercise and then relieved with rest*

Critical ischaemia*: chronic (≥2 weeks) ischaemic rest pain, non healing wound/ulcers, or gangrene in 1 or both legs*

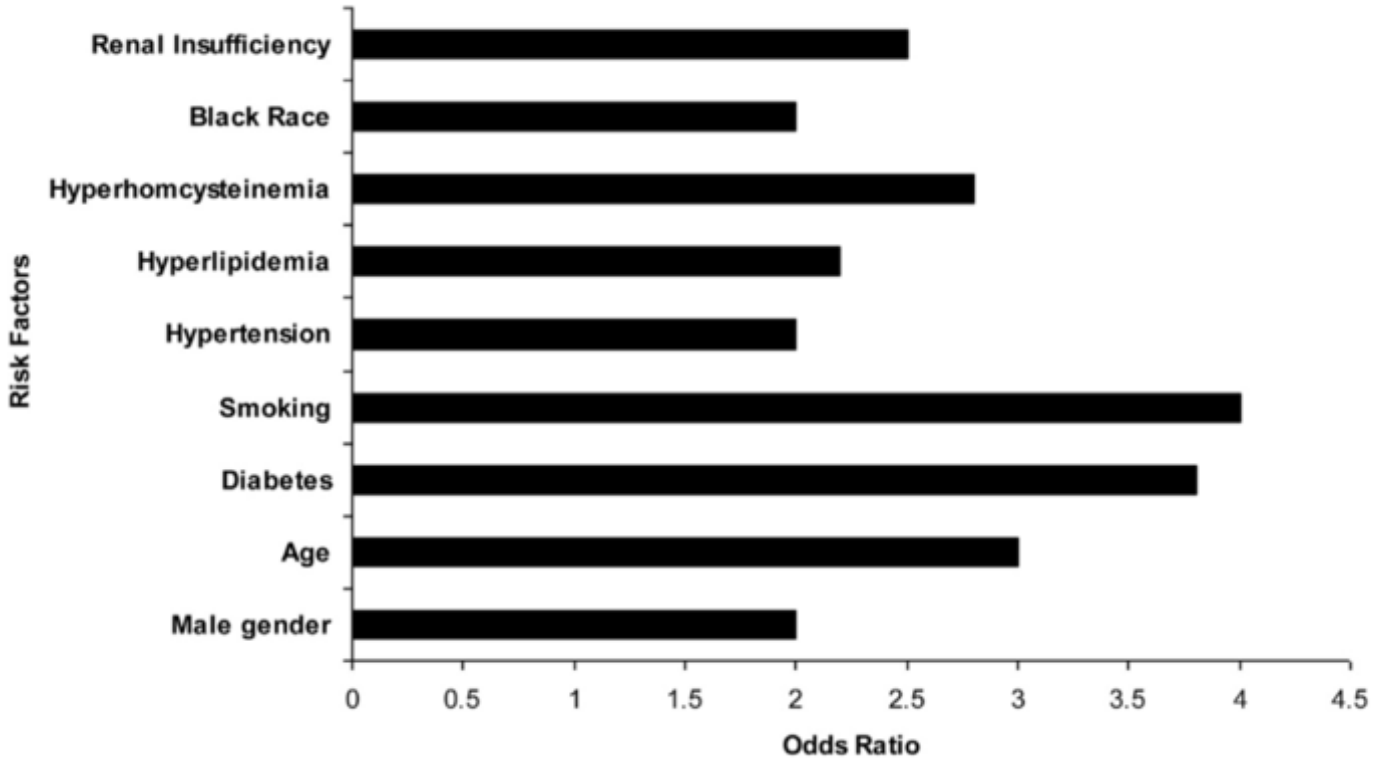
Claudication



All cause mortality



Risk factors



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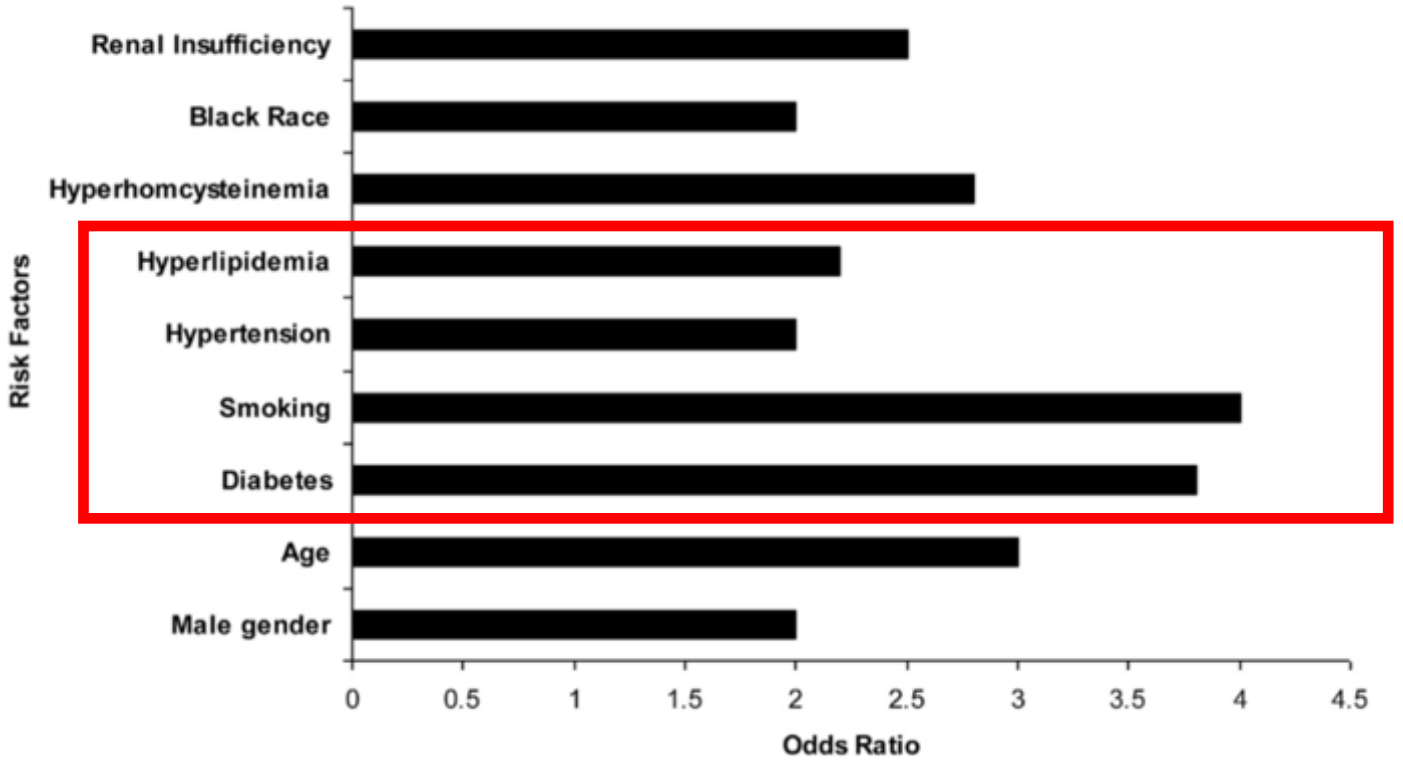

Current situation

Late presentation

Increased incidence of thrombosis

- Direct endothelial injury by virus
- Disruption of coagulation mechanisms due to cytokine storm

Acute limb ischaemia in patients with no evidence of vascular disease

Increased requirement for amputation

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PVD Best medical therapy

Recommendations in patients with peripheral arterial diseases: best medical therapy

Recommendations	Class[a]	Level[b]
Smoking cessation is recommended in all patients with PADs.[27,28]	I	B
Healthy diet and physical activity are recommended for all patients with PADs.	I	C
Statins are recommended in all patients with PADs.[31,32]	I	A
In patients with PADs, it is recommended to reduce LDL-C to <1.8 mmol/L (70 mg/dL) or decrease it by ≥50% if baseline values are 1.8–3.5 mmol/L (70–135 mg/dL).[25]	I	C
In diabetic patients with PADs, strict glycaemic control is recommended.	I	C
Antiplatelet therapy is recommended in patients with symptomatic PADs.[51]	I	C[d]
In patients with PADs and hypertension, it is recommended to control blood pressure at <140/90 mmHg.[41,42,52]	I	A
ACEIs or ARBs should be considered as first-line therapy[c] in patients with PADs and hypertension.[47,53]	IIa	B

Supervised and Home Exercise Programmes

Supervised exercise programmes shown to have most benefit

Home exercise programme:

Exercise into the pain in your muscles until you can no longer be distracted from it

Rest until the pain has subsided then start exercising again

Repeat this cycles for 30 to 60 minutes 3-5 times per week consistently for at least 12 weeks

Venous Ulcers

Venous ulcers

Neurotrophic (diabetic)

Arterial (ischaemic ulcers)

Typically defined by:

Appearance of the ulcer

Ulcer location

Ulcer border

Venous Ulcers

Arterial Ulcers

Diabetic Foor Ulcers

Venous Ulcers

Location	History	Ulcer characteristics	Other findings
Gaiter region of the leg commonly around medial malleolus	Varicose veins DVT Other venous disease Trauma Surgery	Irregular sloping margins Usually shallow Fibrinous, granulating base Variable size High exudate levels Painful	Periwound/lower limb oedema Ankle flare Varicose veins Varicose eczema Lipodermatosclerosis Hyperpigmentation

Venous Ulcer healing rates

6 month healing rates

Community about 45%
Specialist clinics about 45–70%

Average time to healing

5.9 months for VLUs
7.4 months for mixed aetiology ulcers

12 month recurrence rate : 26–69%

recurrences have been reported up to 60 months

EVRA Trial

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Randomized Trial of Early Endovenous Ablation in Venous Ulceration

Manjit S. Gohel, M.D., Francine Heatley, B.Sc., Xinxue Liu, Ph.D., Andrew Bradbury, M.D., Richard Bulbulia, M.D., Nicky Cullum, Ph.D., David M. Epstein, Ph.D., Isaac Nyamekye, M.D., Keith R. Poskitt, M.D., Sophie Renton, M.S., Jane Warwick, Ph.D., and Alun H. Davies, D.Sc., for the EVRA Trial Investigators*

Treatment approach for ulcers

Characterise ulcer

Control CVI with endovenous ablation if appropriate

Compression therapy

Reduce oedema

Control symptoms, e.g. pain

Address or reduce impact of comorbidities

Prevent recurrence once wound has healed

Current situation

Little or no endovenous ablation being undertaken

Priority 4	Surgery that can usually be delayed for more than 3 months • Vein surgery • AVMs without complications • Thoracic outlet syndrome • Claudication

Mainstay of treatment is compression

Prevention / management of infection

Any questions?