INTERMITTENT CLAUDICATION CLASS

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Aims

- What is Intermittent Claudication?
- NICE guideline
- Treatment options
- Exercise class
- Outcomes of MRI class
**Peripheral Arterial Disease**

- Occurs when there is a narrowing of arteries – build up of artheromas  
  (BMJ, 2011)
- Insufficient blood flow to muscles
- Most common symptom of PAD is IC pain  
  (NICE, 2012)
WHAT IS INTERMITTENT CLAUDICATION?
Intermittent Claudication

- Walking induced calf pain in one or both legs relieved by rest (Milani and Lavie, 2007)
- Can lead to critical limb ischaemia (SIGN, 2006)
- Individuals can be de-conditioned due to lack of exercise resulting in reduced QoL (Oka et al, 2005)

Prevalance of PAD
- 14-17% in men
- 11-21% in women over the age of 55 (BMJ, 2011)

Life expectancy reduced due to higher risk of
- MI by 60% (Hirsch et al, 2006)
- Stroke by 40%
# Fontaine Classification

<table>
<thead>
<tr>
<th>Stage</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Symptoms</td>
</tr>
<tr>
<td>2</td>
<td>Intermittent Claudication subdivided into:-</td>
</tr>
<tr>
<td>2a</td>
<td>Without pain on resting, but with claudication at a distance of greater than 200m</td>
</tr>
<tr>
<td>2b</td>
<td>Without pain on resting but with claudication at distance of less than 200m</td>
</tr>
<tr>
<td>3</td>
<td>Nocturnal and/or resting pain</td>
</tr>
<tr>
<td>4</td>
<td>Necrosis and/or gangrene in the limb</td>
</tr>
</tbody>
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ABPI

- Ankle brachial pressure index
- Marker of arterial insufficiency
- Normally systolic BP in legs is equal or slightly greater than in arms
- Ratio of ankle to brachial systolic pressure
- > 1.0 is normal
- < 0.9 abnormal
  - 0.5 – 0.9 – may have IC symptoms
  - < 0.5 – may have CLI
NICE GUIDELINES

- NICE guideline August 2012 – Lower limb peripheral arterial disease: diagnosis and management
- Incidence increases with age
- 20% people over 60 have some degree of PAD
- Risk increases – smoking, diabetes and coronary artery disease
INFORMATION REQUIREMENTS

- Oral and written info about PAD
  - Should include
    - Causes of their symptoms and severity
    - Risk of limb loss
    - Risk factors
    - Pain management
    - Treatment options
    - How to access support for anxiety and depression
  - Tailored to individual needs
- Allow people to make decisions
SECONDARY PREVENTION

- Provide info, advice, support and treatment
  - Smoking cessation
  - Diet, weight management and exercise
  - Lipid modification and statin therapy
  - Prevention, diagnosis and management of diabetes
  - Prevention, diagnosis and management of high BP
  - Antiplatelet therapy
Management on IC

- Supervised exercise should be first line of treatment
  - Offer to all people with IC
  - 2 hours supervised exercise a week for 3 months
  - Exercise to point of max pain

- Angioplasty and stenting
  - Offer only when
    - Advice on modifying risks has been reinforced
    - Exercise programme has not led to satisfactory results
    - Imaging has confirmed suitability
MANAGEMENT OF IC

- **Bypass surgery**
  - Offer for treating people with severe lifestyle limiting IC only when
    - Angioplasty unsuccessful or unsuitable
    - Imaging confirmed suitability

- **Naftidrofuryl oxalate**
  - Consider only when
    - Exercise not led to satisfactory results
    - Person prefers not to be considered for angioplasty or bypass
  - Review after 3-6 months and discontinue if no benefit
IC AND EXERCISE

- Two recent Cochrane reviews
  - Exercise for intermittent claudication – Lane, Ellis, Watson and Lend (2014)
  - Supervised exercise therapy versus non-supervised exercise therapy for intermittent claudication – Fokkenrood, Bendermacher, Lauret, Willigendael, Prins and Teijink (2013)
LANE, ELLIS, WATSON AND LEND (2014)

- 30 RCTs included
- Exercise versus control or medical therapy
- Majority trials small sample but moderate quality
- Compared to usual care exercise improved:
  - Pain free walking overall by 82.29m
  - Maximum walking distance by 108.99m
- Improvements seen for up to 2 years
- Exercise did not improve ABPI
- Data on death and amputation inconclusive due to limited data
Fokkenrood, Bendermacher, Lauret, Willigendael, Prins and Teijink (2013)

- 14 trials patients assigned to supervised or unsupervised
- Each had small numbers but quality of trials graded as moderate to good
- Trials lasting from 6 weeks to 12 months
- Patients in a supervised program improved their walking ability greater than those unsupervised
- After 3 months supervised could walk 180m further than unsupervised
MRI Class

- Started 2001
- Patients referred by vascular consultants
- Monthly IC assessment clinics
  - Assess IC history
  - Explain class
  - Assess suitability
  - Book initial class assessment
- First class session
  - Graded treadmill test (Gardner)
  - EQ5D
- Weekly attendance once a week – 8 lower limb based exercises
- Reassess at 15 weeks
Data 2013-2014

- 37 patients
  - 6 patients 1:1 sessions
  - 6 DNA initial class appointment
  - 6 DNA by 15 week Ax
  - 3 D/C before 15 week Ax
  - 3 not completed 15 week Ax
  - 1 patient had decrease in POD but increase in ACD
- POD improved – 82m
- ACD improved – 109m
- Large increase in referrals since guideline
Improvements in walking distances 2013 - 2014

Number of patients

- Worse
- None (0 - 10m)
- Satisfactory (10 - 120m)
- Significant (120m+)

POD
ACD
CONCLUSION

- More focus on PAD and IC due to NICE guideline
- All patients with IC should be offered supervised exercise
- First line of treatment before other surgical options
- MRI class show results similar to Cochrane reviews
REFERENCES

QUESTIONs?