100 ulcerated limbs treated with Ultrasound Guided Foam Sclerotherapy after four years; is recurrence related to recanalisation?


Cheltenham General Hospital
Disclosure information

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  Accredited Vascular Scientist

- I have no relevant disclosures
Introduction

• Leg ulcers
Introduction

- Leg ulcers
- Recurrence
Introduction

- Leg ulcers
- Recurrence
- ESCHAR

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

12 month ulcer recurrence

<table>
<thead>
<tr>
<th></th>
<th>Compression + Surgery</th>
<th>Compression alone</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>28%</td>
<td></td>
</tr>
</tbody>
</table>

Surgery reduces venous ulcer recurrence
Introduction

- Leg ulcers
- Recurrence
- ESCHAR
- Foam sclerotherapy

<table>
<thead>
<tr>
<th>Pro’s</th>
<th>Con’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable</td>
<td>Durability</td>
</tr>
<tr>
<td>Inexpensive</td>
<td></td>
</tr>
<tr>
<td>Quick</td>
<td></td>
</tr>
<tr>
<td>Easy</td>
<td></td>
</tr>
<tr>
<td>Outpatient</td>
<td></td>
</tr>
</tbody>
</table>
Introduction

- Leg ulcers
- Recurrence
- ESCHAR
- Foam sclerotherapy
- Recanalisation

39% at one year
Aim

To assess the effect of recanalisation following foam sclerotherapy on long term venous ulcer recurrence.
Methods

CEAP 5
Healed Leg Ulceration

CEAP 6
Active Leg Ulceration

July 2010-August 2012
Methods

Leg ulcer service

Cheltenham General Hospital

One stop vascular assessment
Methods

One stop - Treatment - 1-2 weeks - Annually

ABPI - Foam - Venous Duplex - Venous Duplex
Methods

One stop Treatment: 1-2 weeks

Annually

ABPI
Venous Duplex
Venous Duplex
Venous Duplex
Methods

One stop Treatment 1-2 weeks Annually

ABPI Venous Duplex
Methods

One stop Treatment 1-2 weeks
Annually

ABPI Venous Duplex
Venous Duplex
Methods

One stop Treatment: 1-2 weeks

Annually

ABPI
Venous Duplex

Venous Duplex
Methods

One stop Treatment 1-2 weeks Annually

ABPI Foam Venous Duplex Venous Duplex Venous Duplex
Treatment outcomes
Annual Venous Duplex

Occlusion
Segmental recanalisation
Complete recanalisation
Results

n=100 limbs (92 patients)
Median age=74
M:F=50:42

CEAP classification

CEAP 5
n=86

CEAP 6
n=14

Veins treated

Great Saphenous Veins (GSV) 47%
Accessory Saphenous Veins 23%
Short Saphenous Veins (SSV) 11%
GSV+ SSV 10%
Calf tributaries 9%
Results

Duplex 1-2 weeks

- Complete occlusion: 86%
- Short segment occlusion: 13%
- Patent: 1%

n=100
Results

Annual Duplex

Occlusion
n=37
40%

Segmental recanalisation
n=37
40%

Complete recanalisation
n=19
20%
Results

Annual Duplex

Occlusion

n=37
40%

Segmental recanalisation

n=37
40%

Complete recanalisation

n=19
20%
Results

Annual Duplex
Segmental recanalisation

Occlusion
n=37
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Complete recanalisation
n=19
20%
Results

Annual Duplex
Segmental recanalisation
Complete recanalisation

Occlusion
n=37
40%

n=37
40%

n=19
20%
Results

Annual Duplex

Segmental recanalisation

Complete recanalisation

Occlusion

n=37
40%

n=37
40%

n=19
20%

60% recanalisation with reflux
Results

Kaplan Meier Ulcer Recurrence

Healed legs not recurred%

2.3%

Years

0 1 2 3 4

Numbers at risk

99 90 81 73 41

n=99
Results
Kaplan Meier Ulcer Recurrence

Healed legs not recurred%

2.3%
5.1%

Years
0 1 2 3 4

Numbers at risk
99 90 81 73 41

n=99
Results

Kaplan Meier Ulcer Recurrence

Healed legs not recurred%

2.3%
5.1%
11.3%

Numbers at risk

99
90
81
73
41

n=99
Results

Kaplan Meier Ulcer Recurrence

Healed legs not recurred%

<table>
<thead>
<tr>
<th>Years</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Healed legs not recurred%</td>
<td>100</td>
<td>97.7</td>
<td>92.7</td>
<td>89.3</td>
<td>87.6</td>
</tr>
</tbody>
</table>

Numbers at risk

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
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<td>99</td>
<td>90</td>
<td>81</td>
<td>73</td>
<td>41</td>
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n=99
## Results

Recanalised vs non-recanalised veins

<table>
<thead>
<tr>
<th></th>
<th>Ulcer recurrences (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recanalised (n=56)</td>
<td>5</td>
</tr>
<tr>
<td>Non-recanalised (n=37)</td>
<td>5</td>
</tr>
</tbody>
</table>

$p=0.89$
Conclusion

Ulcer recurrence rates low over 4 years

Recanalisation does not predict ulcer recurrence

Causes of ulcer recurrence complex