BODY MASS INDEX, PLANTAR FASCIITIS AND SURGICAL INTERVENTION: A TEN YEAR RETROSPECTIVE ANALYSIS

Erin E. Klein, DPM, MS
Lowell Weil, Jr., DPM, MBA
Lowell Scott Weil, Sr., DPM
Jessica Knight, DPM

Weil Foot & Ankle Institute
Des Plaines, Illinois
www.weil4feet.com
BODY MASS INDEX, HEEL PAIN AND SURGICAL INTERVENTION
A TEN YEAR RETROSPECTIVE ANALYSIS

Erin E. Klein, DPM, MS

My disclosure is in the Final AOFAS Program Book.
I have no potential conflicts with this presentation.
INTRODUCTION

- Plantar fasciitis is a common problem
  - 11 – 15% of office visits yearly
- Obesity has doubled over the past decade
  - 20% of males
  - 25% of females
- BMI has been implicated as a causative factor in the development of plantar fasciitis

- **Purpose:** To investigate the role of BMI in development of and treatment of plantar fasciitis.

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METHODS

- Inclusion criteria:
  - 2002 – 2011
  - Complete medical records
  - BMI = weight (kg)/height(m)^2
- Plantar fasciitis group (PF):
  - 2477 plantar fasciitis patients
- Control group (CG):
  - 2477 patients presenting with other foot pain (paronychia, verrucae, digital fractures, metatarsal fracture, ankle sprains)
- Patients were matched for age, gender and year of presentation.
RESULTS

- 4954 patients analyzed (2477 PF, 2477 CG)

- BMI was significantly different.
  - PF 28.5 ± 6.0
    Range 14 – 42
    95% CI = [16.5 – 40.5]
  - CG 24.9 ± 5.3
    Range 13.5 – 55
    95% CI = [14.3 – 35.0]
  - p < 0.01

- Age, gender and year of presentation were not different.
A larger percentage of overweight and obese patients presented with plantar fasciitis than with other foot pathology.

59.4% of morbidly obese patients presented with plantar fasciitis.
TREATMENT OUTCOMES

- 81.6% of patients were successfully treated with conservative therapy.
- 18.4% required advanced or surgical treatment.
**BMI Influence on Treatment**

- Patients who are overweight or obese have a 2-3x greater chance of failing conservative care.

<table>
<thead>
<tr>
<th>BMI Category</th>
<th>Odds Ratio</th>
<th>95% Confidence Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight (&lt;18.5)</td>
<td>0.336</td>
<td>0.213 – 0.532</td>
</tr>
<tr>
<td>Normal (18.5 – 24.9)</td>
<td>-- --</td>
<td>-- --</td>
</tr>
<tr>
<td>Overweight (25 – 29.9)</td>
<td>2.209</td>
<td>1.931 – 2.527</td>
</tr>
<tr>
<td>Obesity, Class 1 (30 – 34.9)</td>
<td>2.888</td>
<td>2.437 – 3.423</td>
</tr>
<tr>
<td>Obesity, Class 2 (35 – 39.9)</td>
<td>3.076</td>
<td>2.363 – 4.006</td>
</tr>
<tr>
<td>Morbid Obesity (&gt;40)</td>
<td>2.438</td>
<td>1.763 – 3.373</td>
</tr>
</tbody>
</table>
CONCLUSION

- PF patients – higher BMI than CG patients
- PF patients – higher BMI more likely progression to advanced or surgical treatment
- BMI may influence the development of plantar fasciitis as well as the failure of conservative treatment.
- Earlier advanced therapy may be appropriate for overweight or obese patients presenting with plantar fasciitis.
REFERENCES


