Pack wounds in Morocco
Pack Wounds of Donkeys and Mules in the Northern High Atlas & Lowlands of Morocco

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The Problem
Project aims

• To determine whether the prevalence of pack wounds is higher in equids working in the wood trade compared with other trades
• To determine factors associated with the presence of a pack wound
Data collection

- Dec ’07 – Feb ’08
- Wood trade in the mountain region (n=56)
- Other trades in the mountain region (n=37)
- Other trades in the lowland region (n=54)
Wound severity score
<table>
<thead>
<tr>
<th>Score</th>
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<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
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</tbody>
</table>

Score 1: Insufficient
Score 2: Adequate
Score 3: Sufficient with it.
Statistics

• Categorical data (e.g. wood trade yes/no)
  – Chi squared test

• Continuous data (e.g. body condition score)
  – $t$ test or ANOVA
  – Generalised additive models (GAMs)

• Presence of wounds
  – Univariable and Multivariable analysis
Results

• The overall prevalence of wounds in the 3 equid populations was high (54%).
Number of animals with pack wounds

- Is there a problem in the wood trade animals?
Percentage of animals with Grade 2 wounds

- Wood trade pop.
- Control pop. 1
- Control pop. 2

<table>
<thead>
<tr>
<th>Donkeys</th>
<th>Mules</th>
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<td>45%</td>
<td>30%</td>
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Donkeys or mules?

- In all populations the prevalence of pack wounds was higher in donkeys (67%, 60/90) than in mules (35%, 20/57)
- The ‘overall wound score’ was significantly higher ($P<0.001$) in donkeys (median = 2) than in mules (median = 0)
Nonlinear relationship between the distance travelled daily and the risk of suffering a pack wound at any of 3 sites
Overall

- Linear relationship between frequency of work per week and the risk of suffering a pack wound at any of 3 sites.
Risk factors for pack wounds

• Most common wound site was the withers (31%)
Risk factors for pack wounds

• Low body condition score – not a risk factor for a wound
Risk factors for pack wounds

- Significant risk associated with a dirty pack
Risk factors for pack wounds

- Significant risk associated with tight ropes or straps
Risk factors for pack wounds

• Significant risk of sustaining a wound on the tuber coxae associated with increasing length of pack as a proportion of body weight.
Risk factors for pack wounds

• Increased risk associated with increasing age, being male, being a donkey rather than a mule, and travelling longer distances
Study conclusions

• ‘Problem group’ identified
• Specific interventions may be recommended
• Ongoing monitoring of interventions in a logical, scientific manner
SPANA Marrakech

Education
Podiatry
Wound management – acute
Wound management – chronic
Intervention strategies
Intervention strategies
Hobbling
The role of private practice

- Rossdales in the Developing World
- Expertise – 1 vet and 1 nurse to go to work at a clinic in the developing world each year
- Fundraising – Encouraging clients to join in
Sponsors

[Logos for Purina Pro Plan, Bimeda, BCF Innovative Imaging, and VES Veterinary Endoscopy Services]
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