REVISITING WORSENING OF NERVE IMPAIRMENT AFTER MDT

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LEPROSY NEUROPATHY

- Infection
- Neuritis
- Inflammation
- Immunologic response
- Time

- Acute
- Chronic
- Silent
- Recurrent
INFLAMMATORY PROCESS
REVERSIBLE/IRREVERSIBLE

Adapted from MATTAR & AZZE, 1999.
Can recurrent and prolonged neuritis be a sign of relapse? Example case

Dosis (mg)

Begining and end of MDT

Reactional episodes
Example case

2001. Left and right ulnar motor nerve

July 2006. Left ulnar and median nerves
Portaria N°. 3125, 2010
Geralmente ocorrem em período superior a 5 (cinco) anos após a cura.

Principais aspectos para distinção entre estados reacionais e recidiva

<table>
<thead>
<tr>
<th>Características</th>
<th>Reação</th>
<th>*</th>
<th>Recidiva</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Período de ocorrência</strong></td>
<td>Frequentemente durante a PQT e/ou menos frequente no período de dois a três anos após término do tratamento.</td>
<td></td>
<td>Em geral, período superior a cinco anos após término da PQT</td>
</tr>
<tr>
<td><strong>Surgimento</strong></td>
<td>Súbito e inesperado</td>
<td></td>
<td>Lento e insidioso</td>
</tr>
<tr>
<td><strong>Lesões antigas</strong></td>
<td>Algumas ou todas podem se tornar eritematosas, brilhantes, intumescidas e infiltradas</td>
<td></td>
<td>Geralmente imperceptíveis</td>
</tr>
<tr>
<td><strong>Lesões recentes</strong></td>
<td>Em geral, múltiplas</td>
<td></td>
<td>Poucas</td>
</tr>
<tr>
<td><strong>Ulceração</strong></td>
<td>Pode ocorrer</td>
<td></td>
<td>Raramente ocorre</td>
</tr>
<tr>
<td><strong>Regressão</strong></td>
<td>Presença de descamação</td>
<td></td>
<td>Ausência de descamação</td>
</tr>
<tr>
<td><strong>Neural impairment</strong></td>
<td>Many nerves rapidly affected with pain or motor and sensory impairment</td>
<td></td>
<td>Motor and sensory impairment of few nerves slowly develops</td>
</tr>
<tr>
<td><strong>Resposta a medicamentos antirreacionais</strong></td>
<td>Excelente</td>
<td></td>
<td>Não pronunciada</td>
</tr>
</tbody>
</table>

Obs: Marcar com (*) as características correspondentes à Reação ou Recidiva.
a: Vacuolated perineurial cells (Per). Denervated Schwann cells in the endoneurium compartment (arrows).  
b: Denervated Schwann cells (arrows) in the endoneurium (End).
Recurrent and prolonged neuritis can be a sign of relapse. Example case

- Prednisone
- Thalidomide

- Nerve biopsy
- Begining and end of MDT
- Reactional episodes
Left and right ulnar nerves

Left and right median nerves

March 2009
Methods

• Period evaluated: 1998 – 2012
• Institution: Souza Araujo Outpatient Clinic, Fiocruz, Rio de Janeiro, Brazil
• Casuistic: Patients treated for MB and/or PB leprosy with:
  – progressive or new nerve impairment
  – that showed no improvement after steroid therapy
• All patients were evaluated and cleared by experienced dermatologists
Methods

Criteria to investigate relapse according to the neurology department:

• Recurrent Neuritis during a 5 year-period after release from MDT;
• Neuritis after 5 years of release from MDT;
• Nerve function worsening refractory to steroid treatment after 5 years of release from MDT;
Methods

Nerve biopsy was indicated, following neurological examination and nerve conduction study, to define the cause of the insidious nerve impairment.
Methods

Criteria for indication of MDT:
• Presence of Acid-fast bacilli
• Presence of epitheloid granuloma
Results

• Nerve biopsy was performed in 46 patients:
  – 70% male,
  – mean age 42 ± 10.6 years
  – 91% had been treated for MB leprosy
  – Release from MDT: mean of 8.79 years
Nerves biopsied

- Sural: 40%
- Ulnar: 11%
- Superficial peroneal: 49%
Conclusions

• Nerve impairment deterioration can be observed long after release from treatment with MDT.
• Patients may not respond to corticosteroid treatment due to the persistence of infection which requires specific anti-leprosy MDT.
Souza Araújo Leprosy Clinic