Value of MRImaging in Bell’s palsy
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- Are the inflammatory events of the facial nerve evident on an MRI assessment?
- Are the MRImaging-enhancing lesions specific?
- Are there correlations between imaging and surgical findings?
- Is MRImaging helpful for facial nerve decompression decision making?
Gadolinium-enhanced facial nerve lesions on T1 sequence

Are the inflammatory events of the facial nerve evident on an MRI assessment?

High-intensity facial nerve lesions on T2 CISS sequence

Are the inflammatory events of the facial nerve evident on an MRI assessment?
Distribution of Facial nerve Enhancement in Bell’s Palsy

N=186 /155 83%
Are the inflammatory events of the facial nerve evident on an MRI assessment?

Gadolinium-enhanced MRI usually occurs in the distal internal auditory meatus and labyrinthine/geniculate segments.

Are the imaging-enhancing lesions specific?

Correlation between enhancement and severity

No correlation between enhancement and prognosis
Normal MRI in 17% (181/32)

Outcome of 14 Bell’s palsies without facial nerve enhancement

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>6</td>
<td>0</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
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Natural Outcome, after 6 months, on 76 Bell’s palsies with imaging-enhancing lesion of the facial nerve

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Clinical Natural Outcome in Bell’s palsies

Normal MRI in 17% (181/32)

imaging-enhancing lesion

N=14

N=76

Facial nerve enhancement without facial palsy

186 / 14 cases 7.5%

Less signal intensity

Never with normal MRI on paralysed side
Are there correlations between imaging and surgical findings?

Relationship between gadolinium-enhanced MRI & inflamed facial nerve

<table>
<thead>
<tr>
<th></th>
<th>IAC</th>
<th>1st</th>
<th>GG</th>
<th>2nd</th>
<th>3rd</th>
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<tbody>
<tr>
<td>Surgery decompression</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td>12</td>
<td>10</td>
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<tr>
<td>Facial nerve enhancement</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td>12</td>
<td>10</td>
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<tr>
<td>Facial nerve entrapment</td>
<td>18</td>
<td>16</td>
<td>14</td>
<td>12</td>
<td>10</td>
</tr>
</tbody>
</table>
Are there correlations between imaging and surgical findings?
Distribution of Facial nerve Enhancement in Bell’s Palsy

Over 90 days in 6 cases
1 grade II
2 grade III
2 grade V
1 grade VI

Is MR imaging helpful for facial nerve decompression decision making?

27 delayed facial decompressions (1990-2005)

- Preoperative
  HB grade IV: 12 cases
  HB grade V: 11 cases
  HB grade VI: 4 cases
- SURGERY 1 to 4 months after the onset (14 Ramsay Hunt eruption)

- 3 months postoperative
  HB grade II: 8 cases,
  HB grade III: 13 cases
  HB grade IV: 6 cases
- 6 months postoperative
  HB grade II: 9 cases
  HB grade III: 15 cases
  HB grade IV: 3 cases
Is MR imaging helpful for facial nerve decompression decision making?

3 early facial decompressions (2002-2005)

- Preoperative
  - HB grade VI: 3 cases
- Ineffective Medical Treatment
- SURGERY
  - 3 weeks after the onset

- 3 months postoperative
  - HB grade I: 2 cases
  - HB grade II: 1 case
Is MRimaging helpful for facial nerve decompression decision making?

**Early versus late decompression**

Clinical evaluation in 14 cases of Ramsay-Hunt syndrome

<table>
<thead>
<tr>
<th></th>
<th>2 to 3 weeks</th>
<th>3 to 5 weeks</th>
<th>Over 6 weeks</th>
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<tbody>
<tr>
<td>N</td>
<td>3</td>
<td>5</td>
<td>6</td>
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<tr>
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<td>Grade IV</td>
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Requirements for facial nerve decompression decision making

1-Patients who do not show any evidence of recovery until two weeks after the onset of their palsies

2-with Positive gadolinium-enhanced MRI lead to the surgery

Enhancement location leads to the selection of the approach