PERCUTANEOUS SURGICAL CERVICAL DISCECTOMY

Technique and results

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History
T. TAJIMA (Japon)
Brussels 1989
Gastambide: first cervical discectomy in France (1990)
French tools (1992)

Technique
right anterolateral approach under general anesthesia
Neuroleptanalgesia and local anesthesia
C-arm control, lateral and AP
Guide needle follows operator finger and penetrates disk anterior rim middle
A special trephine, with an incorporated auto suction system, takes of disc cores until posterior vertebral wall vertical line

Results: 82 patients,
Mean 42 Y
(sex ratio 35/47)
85 operations

57 at 1 level,
most C5C6,
27 at 2 levels,
1 at 3 levels during the same operation.

Three patients had 2 operations
1 after same level relapse
2 different levels

Lumbar surgical operations
before (3 months to 3 years): 4 patients
after cervical discectomy (8 days à 3 years): 7 patients

Mean follow-up 15 months
80 known results
57 good (71,2%)
14 fair (17,5%)
88,75% success
9 poor (11,2%):
2 arthrodesis in a second operation

Complications:
no infection
no neurological complication
no oesophagal nor vascular wound
Discussion:

• With open surgery, globally 90% satisfied patients. But higher morbidity: complications in 21 patients on 75 at La Pitié 1995-1999 (Journée du rachis de Paris 2001, Sauramps, p.69), 10,5% of complications for S.H. Lee:

<table>
<thead>
<tr>
<th>Complications</th>
<th>Perc. Cerv. Discectomy</th>
<th>Open Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S.H. LEE</td>
<td>D. GASTAMBIDE</td>
</tr>
<tr>
<td>Graft mobilization</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reversible recurrent nerve impairment</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Graft collapse</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>Transitory pyramidal s.</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Cl. Bernard Horner</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Superf. compl. on cerv. Incision or</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>donor site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carotid wound</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Sec. sympt. wors.</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Total Complications</td>
<td>4/145 patients</td>
<td>0/82 patients</td>
</tr>
<tr>
<td></td>
<td>4/227</td>
<td>1,76%</td>
</tr>
</tbody>
</table>

• Chymionucleolysis contra-indications in allergic patients End of Chymiodactine production

Our indications:
Median, paramedian, lateral hernias, Important hernia size: no contra-indication
Disco-osteophytic hernias if < osseous part

Border indications:
Relapsed hernia after open surgery
Same level (1 patient)
adjacent levels (1 patient)

Our contra-indications:
excluded hernias
stenosis
pyramidal syndromes
Severe neurological deficits

Advantages of perc. Techn.: simple, + fast,
complications <<:
• epidural bleeding=0,
• periradicular fibrosis=0,
• No graft compl., no post-op kyphosis, no sec. displacement

Disadvantages of perc. T.:
• Learning curve,
• Specific tools
• Irradiation,
• Contra-indication in stenosis

Some indications in disco-osteophytic hernias,
No interference with further open surgery

Conclusion:
Although technical care has to be particularly strict, this method has proved its efficiency and has less complications than open techniques