Leiden University Medical Center

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iPLUTO - international PLexus oUtcome sTudy grOup

First Results of the Surveys

Introduction

Obstetric Brachial Plexus Lesions are rare, so pooling of data from centers is necessary for deciding on optimal treatment strategy. In a systematic review by Sarac et al. (2015) , however, 59 different outcome measures were identified in 217 studies. This means that pooling of data from current literature is not possible.

There is a need for a 'minimal shared dataset' for pooling and comparing of data.

Minimal Shared Dataset (proposal)

- ❖ Components
- movement / range of motion
- force
- scoring systems (e.g. Mallet, Raimondi, BPOM)
- sensation / pain
- functional outcome (PROMs)
- ❖ inclusion of all domains of the ICF
- ❖ collected at standardized time points
  e.g. 3 years / 5 years / 7 years

Participants

~300 email addresses
participants of
- Narakas meetings 2011 & 2016
- Toronto Obstetrical Brachial Plexus Palsy Workshop 2014

limited to one participant per Brachial Plexus Center

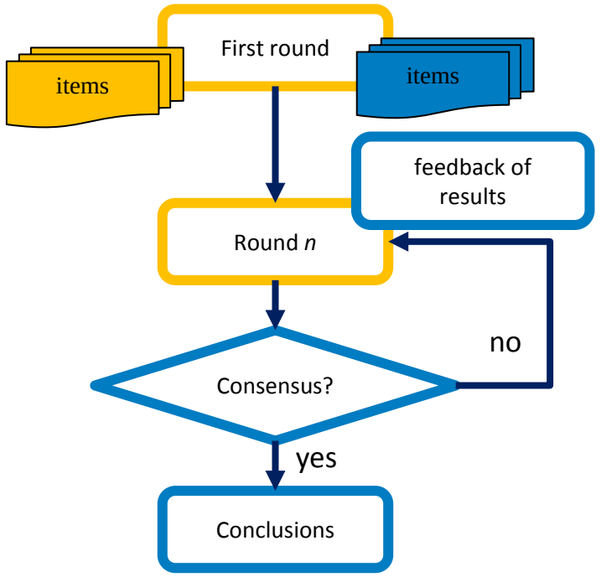
Methods

A Delphi *e*-survey was started, using the Net-Q interface.

In the First Round an inventory was made of methods currently employed by the participants, and included open end questions for suggestion of items.

In the Second Round the items were evaluated using a 9 point Likert-scale. During analysis categories 1-3, 4-6 and 7-9 were grouped. Consensus level was set at 75%.

In the Third Round the results of the Second Round were reported to the participants and items were re-evaluated.



Results (after Round 2)

The answers of 72 participants were analyzed.

For some items consensus was reached in this round.

Lesion Severity

51/72 Participants judged the Narakas classification as a suitable tool to express lesion severity; this equals 71%, so just below the consensus level of 75%. For 'Time to recovery of elbow flexion' consensus was reached (79%).

Serial investigation at 1-3-6-9 months of key movements (External rotation, Abduction, Elbow flexion, Wrist extension, Finger flexion, Finger extension) was judged as essential to document a baseline of neurological deficit and spontaneous recovery.

Outcome Measures

'Active range of motion (in degrees)' was judged as an appropriate outcome measure, and essential to include in a minimal dataset by 95% of participants. This was superior to Active Movement System or Muscle force. The 'Mallet Score' was judged as appropriate by 81% and essential by 76%.

Results *continued*

PROMs

Only 17% judged themselves as capable to judge different PROMs (Patient Reported Outcome Measures), while 44% valued PROMs as a appropriate outcome measure.

Time Points

Participants agreed on the proposal for standardized time points, and added the 2 and 15 year time point.

Conclusions

Consensus was reached on a limited number of items. The results of the next round – currently in progress – have to be awaited for definite conclusions.

Acknowledgments

Thank you to all contributors.

… is an appropriate measure to express treatment outcome. (1-9)	Sum of scores 7/8/9
Passive range of motion (in degrees)	76%*
Active range of motion (in degrees)	96%*
Active range of motion (in AMS)	54%
Muscle Force	63%
Mallet Score	81%*
Gilbert Elbow Score	19%
Raimondi Hand Score	36%
BPOM Brachial Plexus Outcome Measure	27%
AHA Assisting Hand Assessment	27%

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2017 ASPN ANNUAL MEETING
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