



# Is the term “obstetrical brachial plexus palsy” obsolete? An international survey to assess consensus among peripheral nerve surgeons

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## KEYWORDS

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Neonatal brachial plexus palsy;  
Birth brachial plexus palsy;  
Infant brachial plexus palsy;  
Erb's palsy

**Summary** *Background:* Brachial plexus injury diagnosed following delivery often causes life-long disability and frequently results in litigation. While there is no universally accepted name for this condition, the term ‘obstetrical brachial plexus palsy’ (OBPP) is commonly used worldwide. The difficulty with the term ‘OBPP’ lies with the use of the word ‘obstetrical’, which some have construed to imply obstetrical malpractice even if none occurred. Many regions, especially in the United States, are suffering increasing obstetrician shortages, sometimes as a result of unsustainable liability insurance premiums. We wanted to determine whether surgeons felt that an alternative to the term ‘OBPP’ was more appropriate.

*Methods:* We surveyed peripheral nerve surgeons worldwide to determine the appropriateness of the term ‘OBPP’ and alternative terms.

*Results:* The majority of US-based surgeons (94%) preferred alternative terms, such as ‘neonatal brachial plexus palsy’. However, only 53% of surgeons from other regions preferred alternative terms. This difference was statistically significant ( $p < 0.0002$ ).

*Conclusions:* More precise and descriptive alternatives to the term ‘OBPP’ are available and acceptable to many surgeons. An alternative to ‘OBPP’ may improve communication between practitioners, families and the legal system, especially in the United States. Our peripheral nerve organisations may be able to provide further leadership on this matter.

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Brachial plexus injury diagnosed following childbirth may cause disability and may result in litigation in some jurisdictions.<sup>3</sup> Clinically, most injuries affect the upper trunk of the brachial plexus (C5 and C6 nerve roots), affecting shoulder abduction, external rotation and elbow flexion; more severe injuries impair hand function as well.<sup>3</sup> While there is no universally accepted name for this condition, the term 'obstetrical brachial plexus palsy' (OBPP) is commonly used worldwide.<sup>3</sup> The pathophysiology of OBPP is not completely clear, but mechanical traction on the brachial plexus during delivery due to manipulation of the foetus as well as maternal expulsive forces may contribute to injury.<sup>1</sup> Also, certain foetuses may be more prone to forces that would not otherwise be injurious to the brachial plexus.<sup>5</sup> Although delivery via caesarean section theoretically significantly reduces traumatic traction on the plexus, OBPP can still occur.<sup>2,4-6</sup> Indeed, OBPP occurs in infants with a notable absence of any apparent risk factors.<sup>5</sup>

In light of this complex aetiological and medico-legal background, the difficulty with the term 'OBPP' is twofold. First, some may interpret the term as suggesting malpractice on the part of the obstetrician. Second, imprecise terminology may encourage families to pursue unwarranted litigation. Some medical professionals are of the opinion that a better term is needed.<sup>8</sup>

We wanted to determine the level of support for a change in terminology among surgeons. Therefore, we surveyed paediatric brachial plexus surgeons to determine the appropriateness of the term 'OBPP' and other alternative terms.

## Materials and methods

A seven-item survey was anonymously administered to surgeons either using the survey website SurveyMonkey.com or via a paper form (Figure 1). In 2008, the survey was

1) What is your medical specialty? (Please select all that apply)

- ☐ Hand and Upper Extremity Surgeon
- ☐ Neurological Surgeon
- ☐ Neurologist
- ☐ Orthopedic Surgeon
- ☐ Plastic and Reconstructive Surgeon
- ☐ Physical Therapist
- ☐ Obstetrician (OB/GYN)
- ☐ Occupational Therapist
- ☐ Other (please specify)

2) After completion of your specialty training, how many years have you been in practice?

3) Where do you practice? (Please select one country below)

- ☐ Canada
- ☐ France
- ☐ Germany
- ☐ United Kingdom
- ☐ United States
- ☐ Other (please specify)

Please consider the following case.

An otherwise healthy newborn presents with unilateral arm weakness after a difficult delivery. The baby has a flexed wrist, the digits are held in flexion, the elbow is extended, and the shoulder is held in adduction.

4) How many infant patients with an injury similar to the one described in the case above do you see each year, on average?

5) What terminology do you find most appropriate in naming the injury described in the case above? (Please select only one)

- ☐ Infant Brachial Plexus Palsy
- ☐ Congenital Brachial Plexus Palsy
- ☐ Neonatal Brachial Plexus Palsy
- ☐ Birth Brachial Plexus Palsy
- ☐ Erb's Palsy
- ☐ Obstetrical Brachial Plexus Palsy
- ☐ Perinatal Brachial Plexus Palsy
- ☐ Birth-related Brachial Plexus Palsy
- ☐ Other (please specify)

6) Which of these terms, if any, is inappropriate in naming the injury described in the case above and should not be used to describe this condition? (Please select one or more than one, or if you find that all listed terms are appropriate, please check "None of the above")

- ☐ Infant Brachial Plexus Palsy
- ☐ Congenital Brachial Plexus Palsy
- ☐ Neonatal Brachial Plexus Palsy
- ☐ Birth Brachial Plexus Palsy
- ☐ Erb's Palsy
- ☐ Obstetrical Brachial Plexus Palsy
- ☐ Perinatal Brachial Plexus Palsy
- ☐ Birth-related Brachial Plexus Palsy
- ☐ Other (please specify)
- ☐ None of the above

7) The following three items are statements regarding the use of the terminology "Obstetrical Brachial Plexus Palsy" to describe the injury illustrated in the case given above. For each of the following statements, please identify the option that best describes your opinion.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The terminology "Obstetrical Brachial Plexus Palsy" implies a departure from the standard of care during delivery by the obstetrician.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The terminology "Obstetrical Brachial Plexus Palsy" has a pejorative connotation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The term "Obstetrical Brachial Plexus Palsy" should no longer be used.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 1 The seven survey questions. Items in questions 5 and 6 were randomized for each subject taking the survey.

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