

Multiple Choice Questions Section

The Neuroscience Journal introduces this new section on multiple choice questions as part of its commitment to continuous education and learning in Neurosciences. Experts in various neuroscience specialties are invited to participate with their knowledge and expertise in this section.

Neurology, neurosurgery, and other board residents are encouraged to read this section to improve their knowledge and direct their reading for written examinations.

Obstetric brachial plexus injury

Bassam M. Addas, FRCSC.

From the Section of Neurosurgery, Department of Surgery, King Abdul-Aziz University, Jeddah, Kingdom of Saudi Arabia.
Tel. +966 (2) 640-8222. Ext. 18230. E-mail: addasneuro@yahoo.ca

Choose the most appropriate single answer.

1. The incidence of obstetric brachial plexus injury of live births is
 - a. 0.1-0.2%
 - b. 1-2%
 - c. 2-5%
 - d. 5-10%
2. The most common brachial plexus elements involved is/are
 - a. Upper trunk
 - b. Upper and middle trunk
 - c. All trunks (pan plexus)
 - d. Lower trunk
3. The most common cause of obstetric brachial plexus injury is
 - a. Cephalopelvic disproportion
 - b. Obese babies
 - c. Shoulder dystocia
 - d. Diabetic mother
4. The first line of management is
 - a. Assurance of the family and physiotherapy of involved arm
 - b. Early surgery in the first 2 months
 - c. Splint of the involved arm to prevent further injury
 - d. Radiological investigation (MRI) and EMG to differentiate between neuropraxia and axontemesis
5. The best timing for surgery in the absence of spontaneous recovery of the biceps is
 - a. Four months
 - b. Nine months
 - c. One year
 - d. One and a half years

Answers:

1. **a**

The incidence of obstetric brachial plexus injury is reported by several authors across the world to be approximately one case per every 1000 live births.¹

2. **a**

The most common injured element of the brachial plexus is the upper trunk as it is the shortest of all elements and the closest to the neck-shoulder region.²

3. **c**

Although all the mentioned causes can contribute to the development of obstetric brachial plexus injury, shoulder dystocia is believed to be the single most important factor.²

4. **a**

Once the baby is born, plain x-rays of the clavicle and shoulder are carried out to rule out clavicle and humerus fractures, if normal the family is assured and told of the relatively good prognosis. They are also instructed on shoulder and elbow exercises to maintain the muscle bulk while the nerves recover. Both MRI and EMG can be misleading in the very young and are reserved for selected cases.²

5. **a**

It is generally agreed that surgery is best performed between 4-6 months if no spontaneous recovery of the biceps muscle takes place. Delaying surgery beyond this time period is believed to increase the denervation period and may be associated with poor outcome.²

References

1. Sloof AC. Obstetric brachial plexus lesions and their neurosurgical treatment. *Clin Neurol Neurosurg* 1993; 95 (Suppl) S73-S77.
2. Gilbert A, editor. Indications and strategy. In *Brachial plexus injury*. London (UK): Martin Dunitz; 2000. p. 205-210.