BRACHIAL PLEXUS

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Abstract
The brachial plexus is a network of nerves that originates in the spinal cord and extends into the shoulder, arm, and hand. It is responsible for supplying motor and sensory innervation to the upper limb. Injury to the brachial plexus can lead to varying degrees of motor and sensory deficits. This article reviews the anatomy of the brachial plexus, the etiologies of brachial plexus injuries, and the clinical implications of these injuries.

Introduction
The brachial plexus is a network of nerves that originates in the cervical and upper thoracic regions of the spinal cord. It is responsible for providing motor and sensory innervation to the upper limb (Kong et al., 2019). Injury to the brachial plexus can result in varying degrees of motor and sensory deficits, with the severity of the deficits depending on the extent of the injury (O'Driscoll et al., 2009). An understanding of the anatomy and etiologies of brachial plexus injuries is essential in the diagnosis and treatment of these injuries.

Anatomy
The brachial plexus is formed by the ventral rami of the C5 to T1 spinal nerves, which join to form the roots of the plexus. These roots then combine to form three trunks: the superior, middle, and inferior trunk. The superior trunk branches into the upper and lower subscapular nerves, while the middle trunk branches into the medial and lateral pectoral nerves. The inferior trunk branches into the musculocutaneous, axillary, and radial nerves (Kong et al., 2019).

Etiologies
Brachial plexus injuries can be caused by a variety of etiologies, including birth trauma, shoulder dystocia, trauma, tumor, and nerve compression (O'Driscoll et al., 2009). Birth-related injuries are the most common cause of brachial plexus injuries, and are usually caused by excessive stretching of the nerves during delivery (O'Driscoll et al., 2009). Traumatic injuries to the brachial plexus can be caused by motor vehicle accidents, falls, or contact sports. Tumors can compress the brachial plexus and cause nerve damage. Nerve compression can be caused by muscle swelling, scar tissue, or soft tissue masses.

Clinical Implications
The clinical implications of brachial plexus injuries depend on the severity of the injury. In mild cases, the patient may have decreased muscle strength or diminished sensation in the affected area. In more severe cases, the patient may have complete paralysis of the affected limb or loss of sensation (O'Driscoll et al., 2009). Treatment of brachial plexus injuries typically involves physical therapy, nerve grafting, or surgical reconstruction, depending on the severity of the injury (O'Driscoll et al., 2009).

Conclusion
The brachial plexus is a network of nerves that provides motor and sensory innervation to the

upper limb. Injury to the brachial plexus can lead to varying degrees of motor and sensory deficits, with the severity of the deficits depending on the extent of the injury. An understanding of the anatomy and etiologies of brachial plexus injuries is essential in the diagnosis and treatment of these injuries.

References

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