

### DEFINITION

1. **Diaphragmatic paralysis** is a neuromuscular paralysis of one or both leaves of the diaphragm which may be partial or complete.

### CLINICAL FEATURES

2. The condition is often asymptomatic.
3. The diagnosis is made radiologically, but the diagnosis can be suspected at the bedside by observing inward, instead of outward, motion of the abdomen on inspiration. Muscle action potential and transdiaphragmatic pressure readings and electrical stimulation of the phrenic nerve can all aid in diagnosis.
4. If there are respiratory symptoms, they are worse when the patient is supine, as the abdominal contents then displace the diaphragm upwards. In bilateral paralysis there may be hyperventilation, sometimes with frank respiratory failure.

### AETIOLOGY

5. Interruption of the phrenic nerve from its origin in the C3-C5 nerve roots to its entry into the diaphragm results in the condition.
6. Unilateral paralysis is frequently associated with invasion of the phrenic nerve by **tumour**.
7. Paralysis may also occur in various **neurologic disorders** such as poliomyelitis and herpes zoster.
8. Bilateral paralysis may occur in various **myopathies** and with high transections of the spinal cord.
9. It may result from **trauma** to the thorax or cervical spine or from **compression** caused by condition such as a substernal thyroid, aortic aneurysm or abscess.
10. **Cooling** of the phrenic nerve during cardiac surgery may also cause the condition.
11. Paralysis may be **idiopathic**, an identifiable cause not being found, particularly in unilateral cases.

### CONCLUSION

12. **Diaphragmatic paralysis** is a condition where one or both leaves of the diaphragm lose motor nerve control. There are various causes which have been listed above.

## REFERENCE

Celli B R. Diseases of the Diaphragm, Chest Wall, Pleura and Mediastinum - The Diaphragm. In: Wyngaarden J B, Smith L H and Bennett J C (Eds). Cecil Textbook of Medicine. Philadelphia. W B Saunders Company. 19<sup>th</sup> Ed. 1992. p444.

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