

may be needed to relieve pressure on the nerves or to repair the nerves with grafting (Yang, 2014). In some cases, injection of botulinum toxin A into the pectoralis major muscle may be effective in reducing muscle contractures after birth-related brachial plexus injuries (Yang, 2014).

Phrenic Nerve Paralysis

Phrenic nerve paralysis results in diaphragmatic paralysis as demonstrated by ultrasonography, which shows paradoxical chest movement and an elevated diaphragm. Initially, radiography may not demonstrate an elevated diaphragm if the neonate is receiving positive-pressure ventilation (Verklan and Lopez, 2011). The injury sometimes occurs in conjunction with brachial palsy. Respiratory distress is the most common and important sign of injury. Because injury to the phrenic nerve is usually unilateral, the lung on the affected side does not expand, and respiratory efforts are ineffectual. Breathing is primarily thoracic, and cyanosis, tachypnea, or complete respiratory failure may be seen. Pneumonia and atelectasis on the affected side may also occur.

Nursing Care Management

Nursing care of an infant with facial nerve paralysis involves aiding the infant in sucking and helping the mother with feeding techniques. Because part of the mouth cannot close tightly around the nipple, the use of a soft rubber nipple with a large hole may be helpful. The infant may require gavage feeding to prevent aspiration. Breastfeeding is not contraindicated, but the mother will need additional assistance in helping the infant grasp and compress the areolar area.

If the eyelid of the eye on the affected side does not close completely, artificial tears can be instilled daily to prevent drying of the conjunctiva, sclera, and cornea. The eyelid is often taped shut to prevent accidental injury. If eye care is needed at home, the parents are taught the procedure for administering eye drops before the infant is discharged from the nursery (see Chapter 20).

Nursing care of the newborn with brachial palsy is concerned primarily with proper positioning of the affected arm. The affected arm should be gently immobilized on the upper abdomen if a