

hydrocephalus), evaluated at 12 months, and there was an improvement in mental and motor function scores at 30 months in the children who had prenatal surgery (compared with children who had postnatal surgery) ([Adzick, Thom, Spong, et al, 2011](#)). Outcome data for urologic and bowel function are not available at this time.

Infancy

Initial care of the newborn involves preventing infection; performing a neurologic assessment, including observing for associated anomalies; and dealing with the impact of the anomaly on the family. Although meningoceles are repaired early, especially if there is danger of rupture of the sac, the philosophy regarding skin closure of myelomeningocele varies. Most authorities believe that early closure, within the first 24 to 72 hours, offers the most favorable outcome. Early closure, preferably in the first 12 to 18 hours, not only prevents local infection and trauma to the exposed tissues but also avoids stretching of other nerve roots (which may occur as the meningeal sac expands during the first hours after birth), thus preventing further motor impairment. Broad-spectrum antibiotics are initiated, and neurotoxic substances, such as povidone/iodine are avoided at the malformation.

Improved surgical techniques do not alter the major physical disability and deformity or chronic urinary tract infections that affect the quality of life for these children. Superimposed on these physical problems are the disorder's effects on family life and finances and on school and hospital services.

Orthopedic Considerations

According to most orthopedists, musculoskeletal problems that will affect later locomotion should be evaluated early, and treatment, when indicated, should be instituted without delay. Neurologic assessment will determine the neurosegmental level of the lesion and enable recognition of spasticity and progressive paralysis, potential for deformity, and functional expectations. Orthopedic management includes prevention of joint contractures, correction of any existing deformities, prevention or minimization of the effects of motor and sensory deficits, prevention of skin breakdown, and obtaining the best possible function of affected lower extremities.