Birth and Developmental Defects

Some skeletal defects may be diagnosed at birth or within days, weeks, or months after birth. In other cases, the deviation may be difficult to detect without careful inspection. Therefore, it is imperative that nurses become acquainted with signs of these defects and understand the principles of therapy in order to direct families in the care and management of these children.

Developmental Dysplasia of the Hip

The broad term **developmental dysplasia of the hip (DDH)** describes a spectrum of disorders related to abnormal development of the hip that may occur at any time during fetal life, infancy, or childhood. A change in terminology from *congenital hip dysplasia* and *congenital dislocation of the hip* to DDH more properly reflects a variety of hip abnormalities in which there is a shallow acetabulum, subluxation, or dislocation.

The incidence of hip dysplasia varies depending on ethnicity/race but is approximately 1 to 2 infants per 1000 live births in the United States. Girls are affected more commonly than boys and a positive family history increases a child's risk of having DDH. Approximately 7% to 40% of infants with DDH have a breech intrauterine position (Loder and Skopelja, 2011a).

Pathophysiology

The cause of DDH is unclear but is likely multifactorial. Certain factors such as gender, birth order, family history, intrauterine position, joint laxity, and postnatal positioning are believed to affect the risk of DDH. Predisposing factors associated with DDH may be divided into three broad categories: (1) physiologic factors, which include maternal hormone secretion and intrauterine positioning; (2) mechanical factors, which involve breech presentation, multiple fetus, oligohydramnios, and large infant size as well as swaddling where the hips are maintained in adduction and extension which in time may cause a dislocation; and (3) genetic factors, which entail a higher incidence of DDH in siblings of affected infants and an even greater incidence of recurrence if a sibling and one parent were affected.