

and continued for at least 3 to 4 weeks, but the length of therapy is determined by the duration of the symptoms, the response to treatment, and the sensitivity of the organism; 6 weeks to 4 months may be required in some cases (Kaplan, 2016a). In selected cases, oral antibiotic therapy may follow the IV treatment. Because of the prolonged duration of high-dose antibiotic therapy, it is important to monitor for hematologic, renal, hepatic, ototoxic, and other potential side effects. To prevent antibiotic-associated diarrhea in some children, administration of a probiotic may be considered.

Surgery may be indicated if there is no response to specific antibiotic therapy, a penetrating injury, persistent soft-tissue abscess is seen, or the infection spreads to the joint. Opinions differ regarding surgical intervention, but many advocate sequestrectomy and surgical drainage to decompress the metaphyseal space before purulent fluid erupts and spreads to the subperiosteal space, forming abscesses that strip the periosteum from bone or form draining sinuses. When these complications occur, a chronic infection usually persists, which may require antibiotic therapy for several months.

Nursing Care Management

During the acute phase of illness, movement of the affected limb will cause discomfort; therefore, the child is positioned comfortably with the affected limb supported. A temporary splint or cast may be applied. Weight bearing is avoided in the acute phase, and moving and turning are carried out carefully to minimize pain. The child may require long-term pain medication to deal with the bone pain. Postoperatively, pain medication should be considered as with any other surgical procedure.

Antibiotic therapy requires careful observation and monitoring of the IV equipment and site. A peripherally inserted central catheter (PICC) may be inserted for long-term antibiotic therapy. Antibiotic therapy is often continued at home or through an outpatient infusion clinic.

Standard precautions are implemented for all children with osteomyelitis. If there is an open wound, it is managed according to standard wound care precautions. If a PICC line or central venous catheter (CVC) is inserted, meticulous care should be taken to prevent catheter-related infection.