- Retarded skeletal growth

Diagnostic Evaluation

The diagnosis of hypoparathyroidism is made on the basis of clinical manifestations associated with **decreased serum calcium** and **increased serum phosphorus**. Levels of plasma PTH are low in idiopathic hypoparathyroidism but high in pseudohypoparathyroidism. End-organ responsiveness is tested by the administration of PTH with measurement of urinary cyclic adenosine monophosphate (cAMP). Kidney function tests are included in the differential diagnosis to rule out renal insufficiency. Magnesium levels should also be tested. Although bone radiograph findings are usually normal, they may demonstrate increased bone density and suppressed growth.

Therapeutic Management

The objective of treatment is to maintain normal serum calcium and phosphate levels with minimum complications. Acute or severe tetany is corrected immediately by IV and oral administration of calcium gluconate and follow-up daily doses to achieve normal levels. Twice-daily serum calcium measurements are taken to monitor the efficacy of therapy and prevent hypercalcemia. When diagnosis is confirmed, **vitamin D therapy** is begun. Vitamin D therapy is somewhat difficult to regulate because the drug has a prolonged onset and a long half-life. Some advocate beginning with a lower dose with stepwise increases and careful monitoring of serum calcium until stable levels are achieved. Others prefer rapid induction with higher doses and rapid reduction to lower maintenance levels (Cooper and Gittoes, 2008; Doyle, 2016).

Long-term management usually consists of vitamin D and oral calcium supplementation. Blood calcium and phosphorus are monitored frequently until the levels have stabilized. Renal function, blood pressure, and serum vitamin D levels are measured every 6 months. Serum magnesium levels are measured to permit detection of hypomagnesemia, which may raise the requirement for vitamin D.

Nursing Care Management