Vitamin D insufficiency has been linked with susceptibility to infections, autoimmune diseases and cancers.

Objective To study the effect of vitamin D supplementation on the immunity and the risk of infections during the first year of life in full term infants.

Methods This is a prospective case control study included 99 full term infants attending Minia university hospital during the period from January 2010 to February 2012. They were divided into two groups: group I included forty-eight full term infants supplemented with daily 400 IU vitamin D for 6-months after birth and group II included fifty-one full term infants not supplemented with vitamin D.

Results The incidence of infections totally were less common in infants supplemented with vitamin D than those not supplemented (p-value = 0.01). Ottis media, bronchiolitis, pneumonia and gastroenteritis (p-value = 0.003, 0.001, 0.001and 0.01 respectively) were less common than those not supplemented with vitamin D. History taking and clinical examination and other investigations needed for diagnosis of respiratory, GIT and urinary tract infections were addressed every visit for one year.

Conclusions Vitamin D supplementation decreased the incidence of infections especially respiratory and GIT infections. Maternal vitamin D levels correlated negatively with the incidence of infections.

Urinary infections are an important cause of prolonged jaundice. But there is conflict about the role of the urinary infections on the pathological jaundice in the first 14 days of the life. This study aims to determine the frequency of urinary tract infections in neonates presenting with jaundice in the first 2 weeks of life with bilirubin levels that require phototherapy.

This study was done with neonates 2–14 days old they have indirect bilirubin levels above the phototherapy limit but were not found to have any condition that would lead to elevated bilirubin levels, e.g. systemic infection, isoimmunization, erythrocyte enzyme defect, erythrocyte structural defect, hypothyroidism, sequestrated blood, polycythemia, or metabolic disease. Urine samples for urinalysis and culture were obtained using catheterization.

During the study, 482 neonates presented with jaundice and 262 of these fulfilled our criteria. UTI rate was 12%. Mean bilirubin level was 20.9 ±6.1mg/dL. Thirty-five (15%) of these patients underwent to blood exchange, the rest were treated with phototherapy only. Weight loss in terms of percentage of birth weight was higher on uninfected patients and rebound bilirubin levels was higher on UTI group.

UTIs may present with isolated jaundice and may cause urosepsis, renal scarring, hypertension and chronic renal failure if they are not treated. In the neonatal period, infections lead to hyperbilirubinemia via hemolysis, inadequate conjugation, decreased excretion and oxidant stresses. The findings of this study show the benefits of obtaining urine cultures for the diagnosis of UTI in neonatal patients with hyperbilirubinemia requiring phototherapy who have unexplained hyperbilirubinemia.