The aim of the present study was to detect the frequency of myocardial damage in malnourished children as shown by echocardiography also to detect some other hematological, biochemical and electrolyte abnormalities that occur in malnourished children and may also, by way or another, have effect on the heart.

The study include 104 patients, (40 male and 64 female), malnourished infants and young children diagnosed by special pediatrician during the period extended from November 2011 to May 2012. The patients were recruited from the inpatient department and nutritional rehabilitation unit in the Babylon Pediatric and Maternity Hospital. The age of patients (mean ± SD) was 11.3 ± 7.8.The patients were matched with 20 apparently healthy controls their age (mean ± SD) was9.5 ± 7.6.

All patients underwent full history ,detailed physical examination, Hematological, Biochemical and echocardiographic evaluation.

The study show that there are many alterations in body composition of malnourished children, these alterations were statistically significant regarding weight, mid arm circumference, body mass index, hematological tests , biochemical tests.

Regarding myocardial changes there were statistically significant increment in end systolic dimension (16.07mm ± 7.3SD) and decrement in fractional shortening (38mm ± 0.87SD) in malnourished children. The end diastolic dimension although it was higher in malnourished children (24.7mm ± 7.2SD) however it was statistically not significant.

All patients with significant increase in end systolic dimension were in grade III (severe malnutrition), however patients with significant decrease in functional shortening were distributed in grade II (moderate) and grade III (severe) malnutrition.

We conclude from this study that malnutrition can affect myocardial function although this effect appear clearly only in high grade of malnutrition, and also the higher the grade of malnutrition the more the effect on the myocardium.