SUMMARY: Ferrokinetic investigations were performed in ten patients with prolonged Geophagia. Plasma Iron Clearance (T 1/2) was increased. Plasma Iron Transport Rate (PIT) was decreased in five; Red Cell Iron Utilization (RCU %) was decreased in six, normal in three; Erythrocyte Iron Turnover Rate (EIT) was found to be decreased in five, normal in one and increased in three cases. Erythrocyte Survival Rate (RCS) was found to be shortened in all cases except one.

The radioiron distribution obtained by surface counting over sacrum (Marrow), spleen and liver was performed in three cases. The spleen showed that red cell sequestration increased in two cases. Ferrokinetic data indicated that erythropoiesis is disturbed in children with geophagia.

Key Words: Ferrokinetics, Geophagia, Zinc Deficiency.