

# Endocrinopathies and linear growth in adolescents with $\beta$ -thalassemia intermedia in Relation to liver iron content.

Ashraf Soliman, Mohamed Yassin\*, Ashraf Adel, 106-P3

Departments of Pediatrics and Hematology\*, Hamad Medical Centre , Doha, Qatar

## INTRODUCTION

We evaluated the linear growth and some endocrine functions in 10 adolescents with Thalassemia Intermedia (TI) followed at Hematology Section, Doha (Qatar) in relation to the liver iron content (LIC).

## Patients and Methods

### Data included

1. Auxological data , pubertal stage,
2. transfusion frequency , chelation therapy, and splenectomy.
3. Laboratory data and target organ complications (including endocrinopathies and liver disease were recorded at the last clinic visit.
4. Iron overload was assessed by FerriScan (liver iron content; (LIC) and indirectly by measuring serum ferritin concentration (SF).
5. Bone mineral density (BMD) was assessed by dual-energy X-ray absorptiometry (DXA).

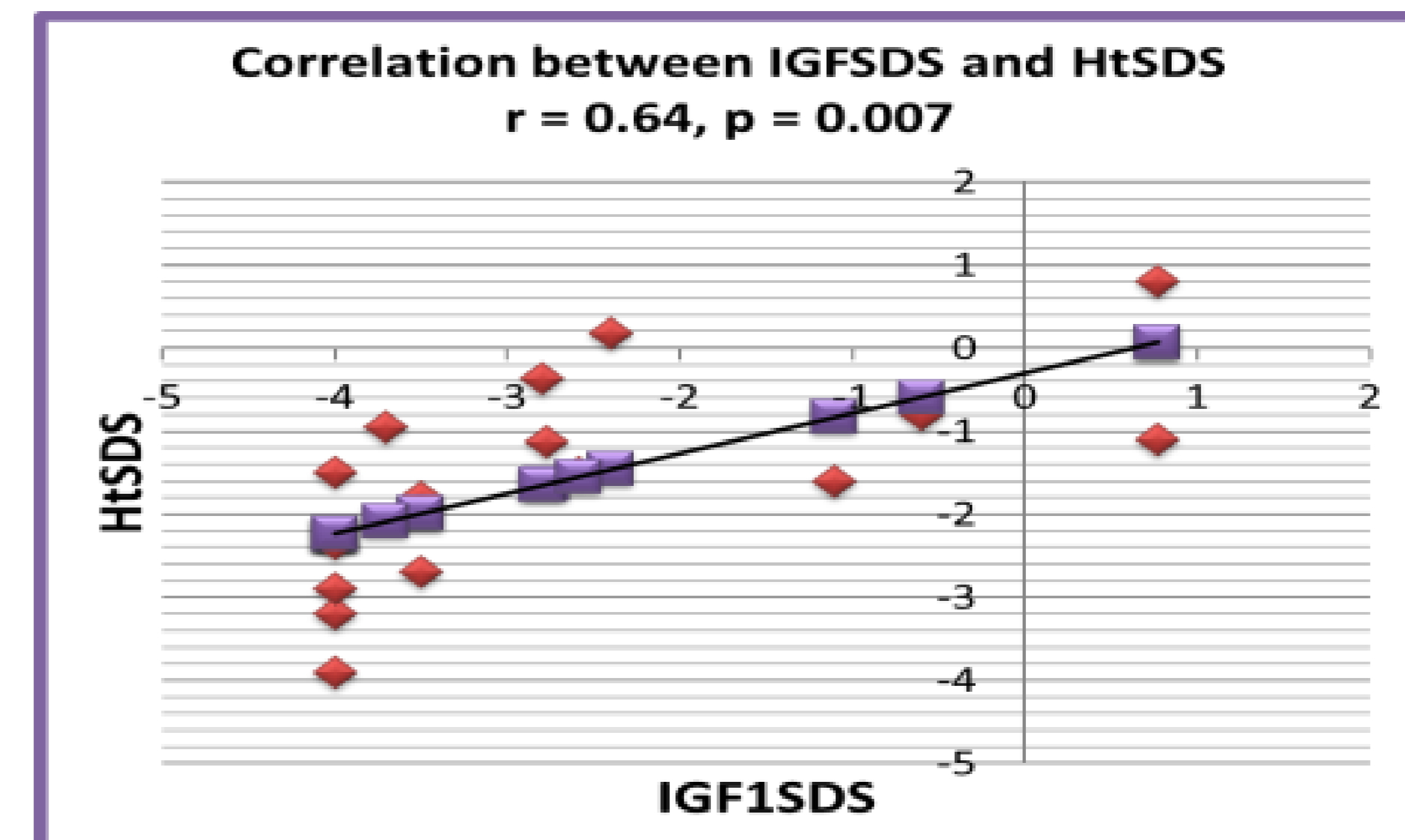
## Results

1. Short stature [(Ht SDS < -2] occurred in 3/10 (30%) with a HtSDS = (-1.95 +/- 0.7)
2. IGF-1- SDS was < -2 in 3/10 with (-1.12 +/- 0.9).
3. Impaired fasting blood glucose occurred in 2/10 and diabetes mellitus in 1/10.
4. Delayed puberty occurred in 1/10.
5. Morning 8 AM cortisol was normal (398 +/- 111) .
6. No thyroid or hypo-parathyroid abnormalities were detected.
7. Free T4 was normal in all patients (mean = 13.2 +/- 1.19 pmol/L).
8. Liver iron content (LIC) > 15 mg/g dry weight and SF > 2,000 ng/mL were detected in 7/10 of patients.
9. High liver enzyme level (ALT) was detected in 3/10 of patients.
10. Osteopenia was diagnosed in one patient.

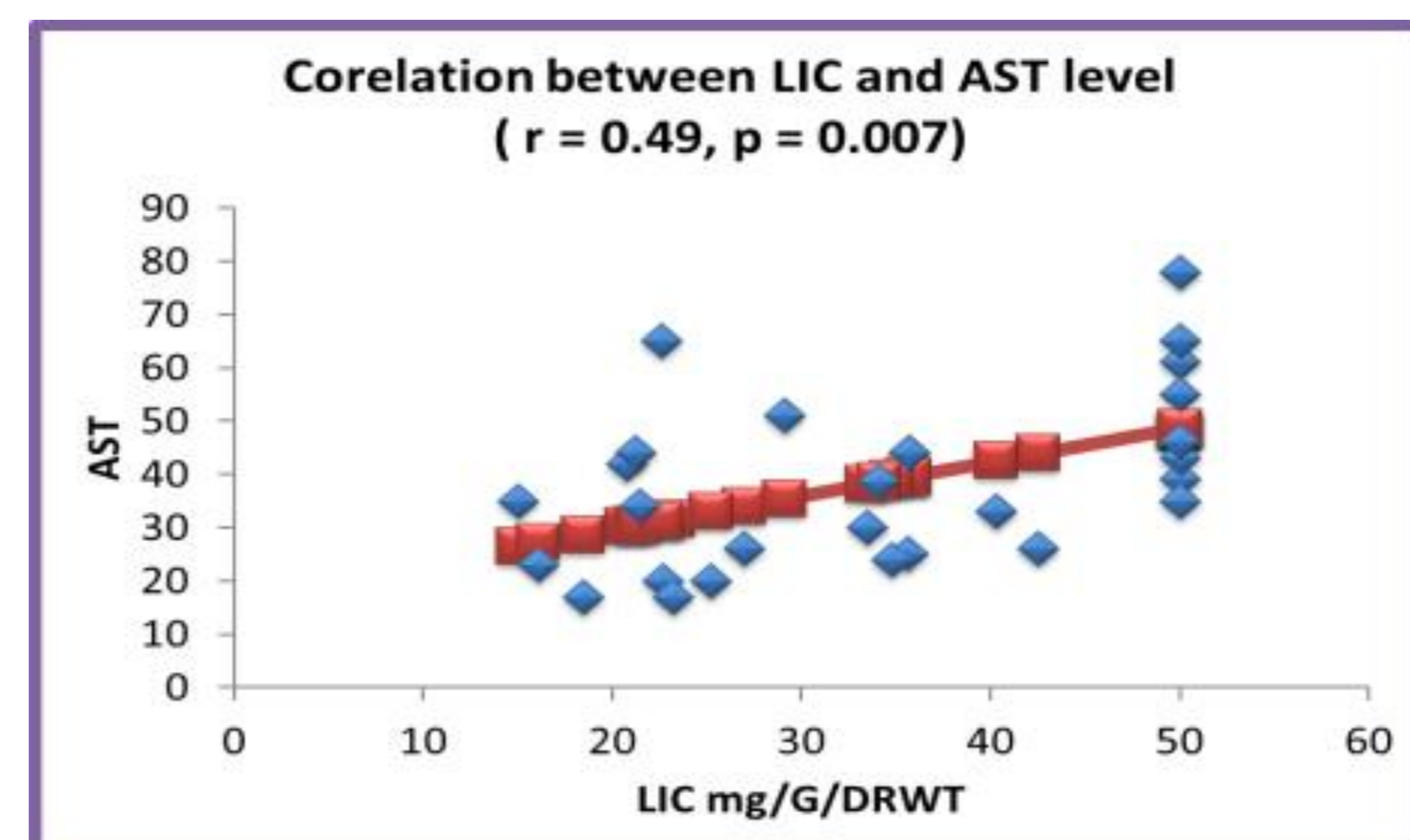
Ashraf Sliman MD PhD FRCP Department of Pediatrics  
Hamad General Hospital Doha, Qatar,  
[Atsoliman@yahoo.com](mailto:Atsoliman@yahoo.com), I declare that I have no potential conflict of interest.

## Results

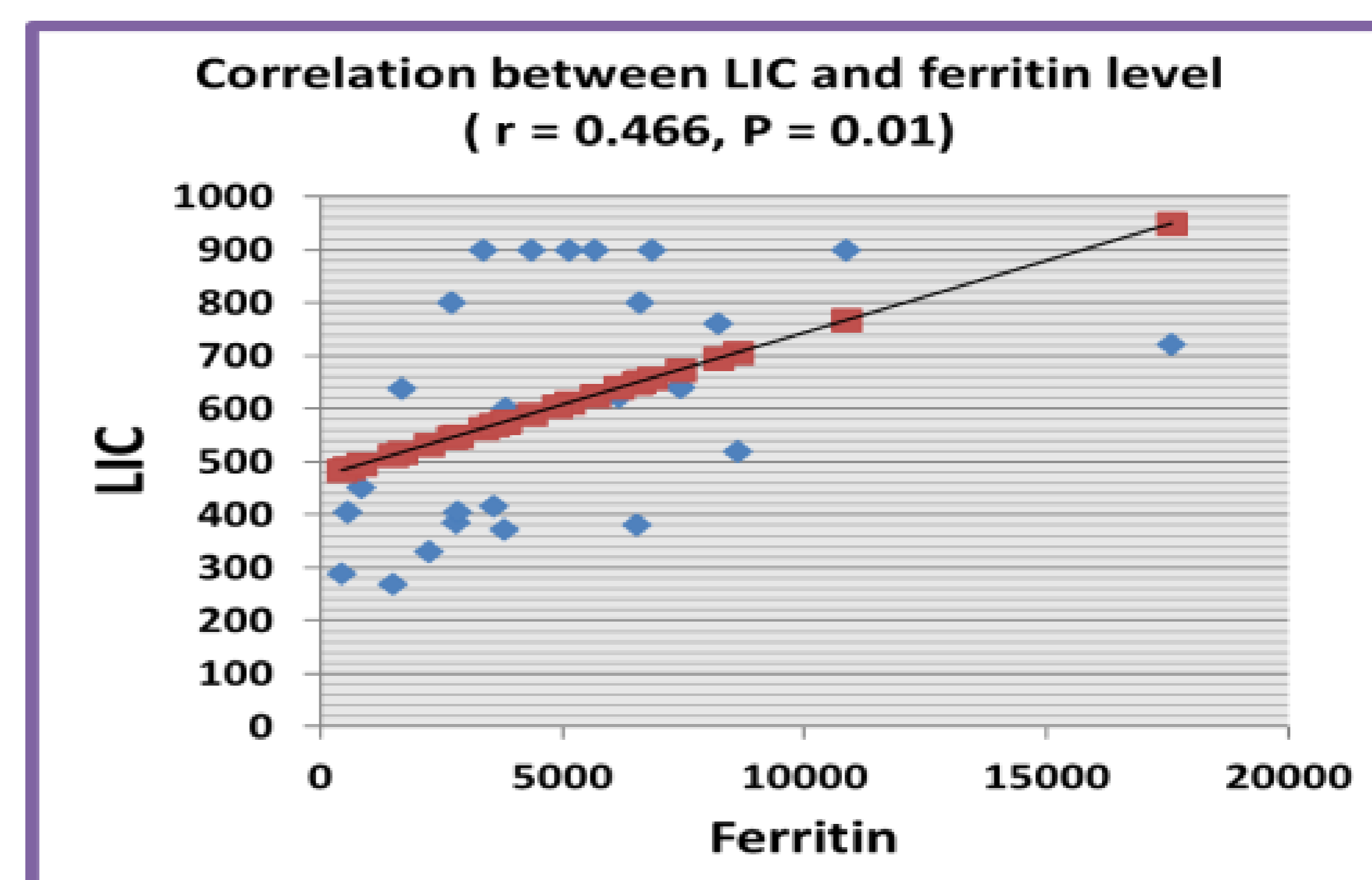
Ht-SDS was correlated significantly with IGF-1 SDS.



LIC was correlated with AST.



LIC was correlated significantly with ferritin concentrations.



## Conclusions

Significant number of TI adolescents on occasional blood transfusion have high LIC, short stature and dysglycemia.

Regular monitoring for these abnormalities is highly recommended