INTRODUCTION

- Beta Thalassemia represents a group of recessively inherited hemoglobin disorders first described by Cooley and Lee, where beta globin chain synthesis is decreased resulting in an excess of alpha chains, resulting in severe anemia.
- The estimated prevalence of beta thalassemia is 3-8% in India, Pakistan, Bangladesh and China.
- The combination of regular blood transfusions and chelation therapy has dramatically increased the life expectancy of thalassemics into 4th & 5th decades of life.
- But it has led to iron overload and chelation toxicity, with many complications including – growth failure, gonadal dysfunction, hypothyroidism, DM etc.

AIMS AND OBJECTIVES

- To study the Incidence and Prevalence of endocrine disturbances in Thalassemia Major children, receiving regular blood transfusions.
- To study the correlation between-
  - Age of starting transfusion
  - Average Sr. Ferritin levels
  - Age of starting chelation
  - AND incidence of Endocrine problems in these children.

METHODOLOGY

- A retrospective study of thalassemia major patients.
- Basic information for each child was determined -
  - Age of presentation, onset of transfusion and chelation.
  - Anthropometric data.
  - Pubertal status- Tanner staging.

Blood investigations

- Sr. Ferritin and average ferritin levels
- Hemoglobin level
- Sr. Calcium/Phosphorus/Alkaline Phosphatase
- PTH (Parathyroid Hormone)
- Thyroid profile – FT3/FT4/TSH
- OGTT (Glucose tolerance test)
- LH/FSH
- Sr. Estradiol (girls)/Sr. Testosterone (boys)

RESULTS

- 225 children were included in the study.
- 32.4% (73/225) children had endocrine complications, while 9.4% of them had more than one endocrine complication.

BIBLIOGRAPHY

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- Conflict of Interest: None

ENDOCRINE DISORDERS IN CHILDREN WITH THALASSEMIA

MAJOR - A RETROSPECTIVE STUDY

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Endocrinology and Multisystemic Diseases

No association was found between age of onset of transfusion and chelation with incidence of endocrine problems.

LARGE SCALE STUDIES ARE REQUIRED TO DETERMINE TRUE INCIDENCE OF ENDOCRINE COMPLICATIONS IN THALASSEMIA.

CONCLUSION

- Hypothyroidism
- Hypopituitary
- DM
- Hypogonadism
- Delayed puberty
- Hypothyroidism

Average Ferritin levels and Incidence of Endocrine Problems

- Hypothyroidism
- Hypopituitary
- DM
- Hypogonadism
- Delayed puberty
- Hypothyroidism

Incidence of different endocrine problems

Hypothyroid
Hypopituitary
DM
Hypogonadism
Delayed puberty
Arrested pub