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Assessment of behavioral and psychological disturbance in children and Adolescent patients with Beta Thalassemia Major

Thesis

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Eman Mahmoud Mustafa Kattab

وقُلِ اعْمَلُوا فَسَيَرَى اللَّهُ عَمَلَكُمْ
ورَسُولُهُ والْمُؤْمِنُونَ

صدق الله العظيم

سورة التوبة آية (105)

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List of abbreviations

γ	:	Gamma
α	:	Alpha
β	:	Beta
ε	:	Epsilon
Hb	:	Hemoglobin
IV	:	Intravenous
SC	:	Subcutaneous
TLC	:	Total leucocyte count
Plt	:	Platelet
T. bil	:	Total bilirubin
D. bil	:	Direct bilirubin
EF	:	Ejection fraction
SD	:	Standard deviation
LVEF	:	Left ventricular ejection fraction
DFO	:	Desferoxamine
RDW	:	Red cell distribution width
rHuEPO	:	Recombinant human erythropoietin
RBC	:	Red blood cell
NTBI	:	Non transferrin Bound plasma iron
T2 MRI	:	Magnetic resonance imaging T2-star
WHO	:	World health organization
MDD	:	Major depressive disorder
PBRS	:	Pediatric behavior rating scale
PBRS-P	:	Pediatric behavior rating scale parents
PBRS-T	:	Pediatric behavior rating scale teachers

STFR	**:**	Serum transferrin receptors
HU	**:**	Hydroxyurea
A	**:**	Alanine
G	**:**	Glycine
TH	**:**	Thalassemia
TM	**:**	Thalassemia Major
TI	**:**	Thalassemia intermedia
LCI	**:**	Labile cellular iron
PH	**:**	Pulmonary hypertension
ACTH	**:**	Adrenocorticotrophic hormone
TRH	**:**	Thyrotropin releasing hormone
ICT	**:**	Iron chelators therapy
IOC	**:**	Iron overload cardiomyopathy
OPSI	**:**	Over whelming post splenectomy infection
HAMP	**:**	Hepcidin antimicrobial peptide gene
L1	**:**	Deferiprone
GH	**:**	Growth hormone
T3	**:**	Tri-iodothyronine
T4	**:**	Tetra-iodothyronine
TSH	**:**	Thyroid stimulating hormone
LH	**:**	Luteinizing hormone
FSH	**:**	Follicular stimulating hormone
GnRH	**:**	Gonadotropin releasing hormone
ECG	**:**	Electrocardiogram
IGF-1	**:**	Insulin growth factor 1

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Assessment of behavioral and psychological disturbance in children and Adolescent patients with Beta Thalassemia Major

Mohamed M. Al-Tawil, Dalia Toaima, Heba H El Shahawi*,EmanM.Khattab.

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Objectives: to study the behavioral and psychological disturbances in children and adolescent patients with beta thalassemia major. **Methods**: A cross sectional case- control study was conducted on 50 children, and adolescents with beta thalassemia major (30patients without complications and 20 patient with complications). They were recruited from hematology Clinic, Children Hospital, Ain Shams University Cairo, Egypt during the period from January 2013 to January 2014.Their age ranged between 6-18 years with a mean of $\pm$8.56 years.They included27 (54%) females and 23 (46%)males. The control group included 50 healthy ages and sex matched healthy subjects. All patientswere subjected to clinical assessment and hematological assessment, behavioral and psychological assessment using a questionnaire: PBRS-P; appropriate for use in children and adolescents aged 6 to 18 years. **Results:** compared to controls allpatientshadstatistically significant behavioral disturbances namely atypical behavior (P<0.001), irritability (P<0.001), grandiosity (P<0.001), aggressive behavior (P<0 .001), affect disorder (P<0.001), hyper activity (p<0.001), inattention (p<0.001), disturbed social interaction (P<0.001) when compared to controls. On comparing patients withoutcomplications and patient with complications as regardedbehavioral disturbances no significant difference was found in atypical behavior (P=0.15), irritability (P=0.14), grandiosity (P=0.90), affect disorder (p=0.76) and hyper activity (P=0.054). Aggressive behavior, inattention and disturbed social interaction were significantly more frequent in complicated group (p= 0.005, p=0.035&p=0.004 respectively).

Conclusions:behavioral and psychological problems are common in patients with beta thalassemia major either with complications or without complications.