Fertility and pregnancy outcome in patients with Transfusion Dependent Thalassemia (TDT): Hospital Pulau Pinang experience

*Tan Sui Keat, Lim Jean Nie, Goh Ai Sim
Haematology Unit, Department of Medicine, Hospital Pulau Pinang, 10990 Penang, Malaysia.
tsuikeat@yahoo.com.sg

Abstract

Advances in the management of thalassemia patients have significantly improved their life expectancy and reproductive potential. To evaluate safety and pregnancy outcome in TDT patients with iron overload. This is a retrospective study of 18 pregnancies in 13 TDT patients who were followed up in Hospital Pulau Pinang between 2000 and 2018. 72.2% out of 18 married TDT patients (10 females, 3 males) had spontaneous reproductive capacity. Their mean pubertal ferritin was 4254ng/ml (range 1088-7405). 70% of the female patients were on deferiprone prior to conception. One third of patients were post-splenectomy. The mean age at pregnancy was 25.5 years old (range 17-34). The mean maternal haemoglobin was 9.4 g/dl. Mean ferritin level increased from 2183ng/ml (range 442-3937) pre-pregnancy to 3112ng/ml (range 1819-4712) after pregnancy. Liver iron burden increased with mean T2* of 5.9ms pre-pregnancy to 1.5ms post-delivery. All pregnancies resulted in live birth except one first trimester miscarriage. The mean birth weight was 2.54 kg whilst the mean gestation was 37.5 weeks. There were two cases of IUGR with birth weight of 2.0 and 2.3kg at term (15%) and a preterm delivery (7.7%) at 28 weeks for eclampsia. No congenital malformation or maternal venous thromboembolism was reported. Fertility was preserved in majority of our TDT patients with iron overload since puberty. The IUGR rate is higher than our general population (15% vs 8%). A higher maternal haemoglobin above 10g/dl should be maintained especially if IUGR is detected antenatally. Prompt resumption of iron chelation after delivery is mandatory as tissue iron accumulates during pregnancy. Pregnancy is safe in TDT patients. The main complications observed were increase in liver iron burden in the pregnant women and higher incidence of IUGR in fetus.

Keywords: Transfusion dependent thalassemia, Intra Uterine Growth Restriction

*Author for Correspondence