OP015

Assessing reversibility of liver fibrosis in patients with transfusion-dependent beta thalassaemia following intensive chelation

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Introduction
Transfusion-related iron overload is a leading cause of hepatic fibrosis in transfusion-dependent thalassaemia (TDT).

Objectives
This study aimed to evaluate the reversibility of liver fibrosis with intensive chelation therapy in TDT.

Methods
Forty-five patients were included. Serum ferritin, hepatic fibrosis & steatosis (assessed by Transient Elastography), and liver iron concentration/LIC (estimated by FerriScan) were recorded at recruitment and after 2 ½ years of intensive chelation. Compliance for iron chelators was monitored and recorded as good (gc), moderate compliance (mc), and poor (pc) compliance based on the number of days the iron chelators were used.

Results
22/45 (49%) were males [mean age (SD)-19 (4.78) years]. There were 23 (51%), 12 (27%), and 10 (22%) patients with gc, mc, and pc with iron chelators, respectively. The LIC decreased in 36 (80%) patients. The median LIC reduction after 2 ½ years was as follows: gc group-13.5 to 5.1 mg Fe/g dw (P=0.0002); mc group-25.5 to 17.75 mg Fe/g dw (P=0.001). In the pc group, the LIC increased by 10.4 mg Fe/g dw (P =0.058). Liver fibrosis declined in 23 (51%) patients. The liver stiffness at recruitment and after 2 ½ years was 7.6 and 7.1 kPa (P=0.08) in the gc group. In both mc and pc groups, liver fibrosis increased on follow-up [significantly worsened in the pc group (P=0.04)].

Conclusion
The reduction of LIC in TDT was related to compliance with chelation therapy; substantial reductions were achieved in those with gc and mc. However, only those with gc managed to arrest the fibrosis progression.

Key words: *Liver fibrosis, Liver iron concentration, LIC, Transfusion dependent beta thalassaemia, Drug compliance*