

Mitofusin 2 Expression in Placental Tissues of Preeclamptic Patients and Its Correlations with Trophoblast Invasion and Placental Hypoxia

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ABSTRACT The researchers aimed to detect mitofusin 2 (Mfn2) expression in the placental tissues of preeclampsia (PE) patients and correlations with trophoblast invasion and placental hypoxia. Mfn2 mRNA expressions in placental tissues from PE and healthy pregnant women were detected by qRT-PCR. Trophoblast cells JEG-3 were transfected with small-interfering RNA-Mfn2 (si-Mfn2). Proliferation was tested by CCK-8 and colony formation assays. Invasion and migration were determined with Transwell assay. Mfn2, HIF-1 α , HPH-1 and leptin protein expressions were detected by Western blotting. Mfn2 protein had strong positive and weak negative expressions in normal and PE women, respectively. Mfn2 mRNA expression in PE women was lower than that in normal women ($P<0.05$). Compared with control and si-NC groups, si-Mfn2 group had lower proliferation, migration and invasion abilities, as well as HIF-1 α , HPH-1 and leptin expressions ($P<0.05$). Mfn2 expression in the placental tissues of PE women obviously decreases, which inhibits trophoblast invasion and triggers placental hypoxia.