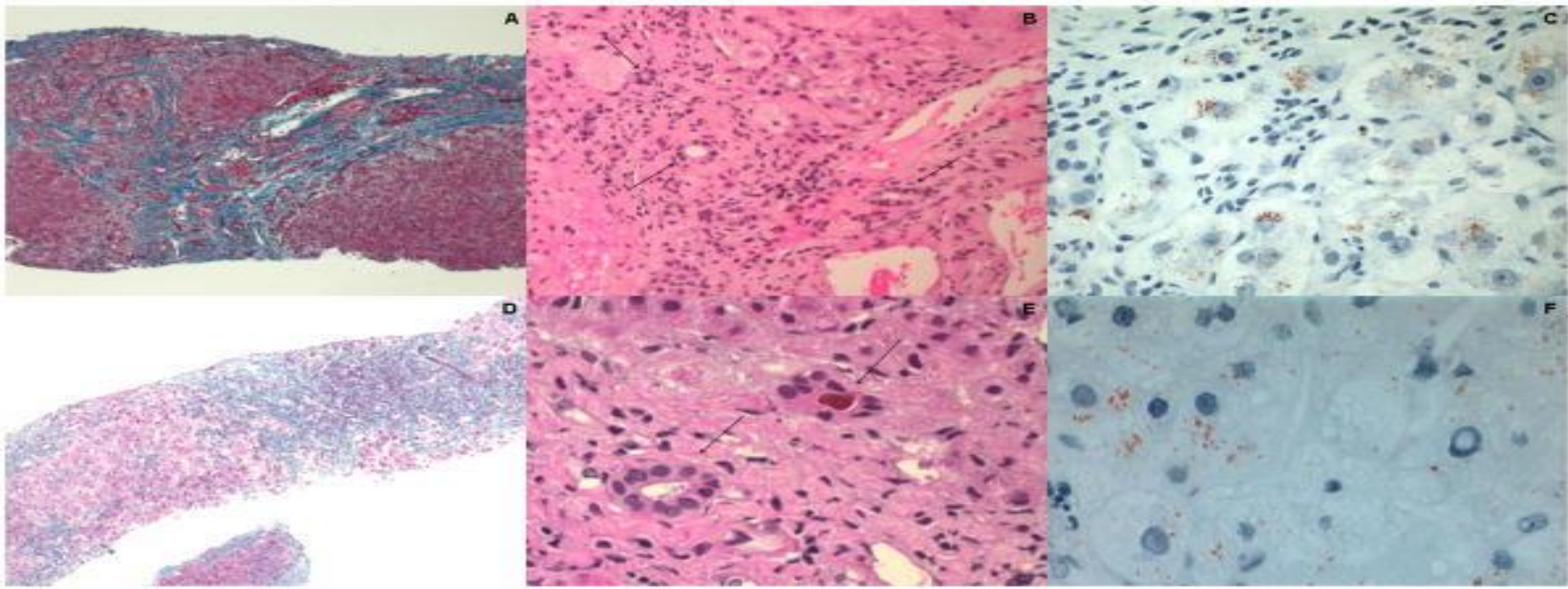


Title: **LEVERAGING MIRENA FOR MANAGING MENSTRUAL DISORDERS IN LIVER TRANSPLANT PATIENT WITH A RARE GENETIC DISORDER**



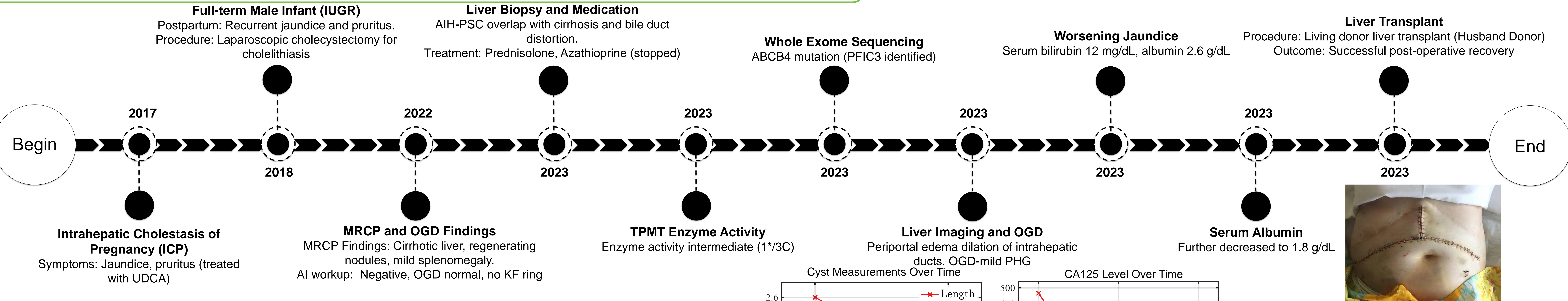
Introduction

This case study follows the journey of a 33-year-old woman (P1L1) diagnosed with progressive familial intrahepatic cholestasis type 3 (PFIC3), a rare genetic disorder typically seen in childhood but first manifesting during her pregnancy. This condition led to a series of adverse clinical events and multiple hospitalizations, ultimately leading to decompensated cirrhosis, placing her life in jeopardy. In 2023, she underwent a life-saving living donor liver transplant, with her husband as the donor—that gave her a second chance at life. However, her struggles did not end there; she continued to suffer from severe dysmenorrhea, pelvic pain, and severe anaemia with menstrual irregularities, leaving her bedridden and severely impacting her quality of life. In April 2024, Imaging revealed a 2.6 cm endometriotic cyst. She underwent hysteroscopic dilation and curettage with Mirena insertion in May with anaesthesia and medical fitness with due risks. Hysteroscopic findings were a small endometrial polyp at the posterior surface of the uterus with bilateral Ostia visualized. This intervention led to significant relief, improving her quality of life. This case is one of its kind in the literature, highlighting the rare manifestation of PFIC3 in adulthood and the pivotal role of liver transplantation and Mirena in overcoming complex medical challenges.



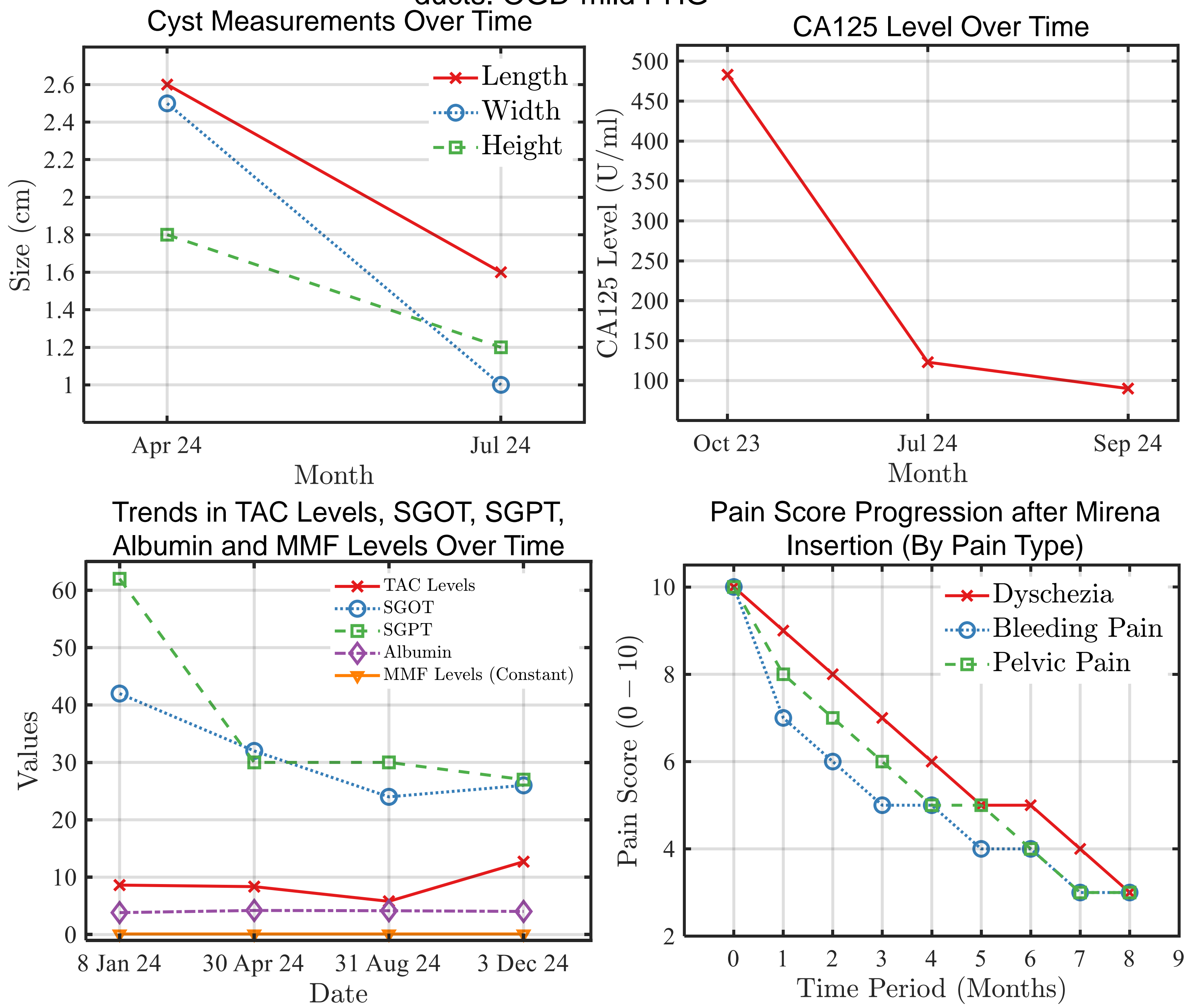
Objective

To explore the effectiveness and safety profile of Mirena IUD in reducing heavy menstrual bleeding and relieving dysmenorrhea in liver transplant recipients with particular attention to liver function, immunosuppressive therapy, and infection risk.



Conclusions

- **PFIC3 Overview:** A genetic liver disorder caused by ABCB4 mutations, leading to liver failure and the need for transplantation, with hormonal management challenges.
- **Women with chronic liver disease (CLD)** are at higher risk due to altered estrogen metabolism and hormonal pathway deregulation.
- **Menstrual Management:** PFIC3 patients often experience hormonal imbalances, complicating treatment.
- **Mirena's Localized Hormone Delivery:** Releases 20 micrograms of levonorgestrel daily directly to the uterus, minimizing systemic absorption and liver strain.
- **WHO/CDC MEC Guidelines:** Mirena is classified as MEC Category 2 for liver transplant patients (benefits outweigh risks), unlike oral contraceptives (MEC Category 4).
- **Mirena for Endometriosis and Dysmenorrhea:** Effective for managing endometriosis-related pain and heavy bleeding, superior to oral contraceptives and copper IUDs.
- **Menorrhagia Management:** Reduces heavy bleeding, mitigating anaemia and coagulopathy risks in liver transplant patients.
- **Safety and Compatibility:** Safer than oral contraceptives and copper IUDs due to minimal systemic effects and dual contraceptive and therapeutic benefits.
- **Quality of Life:** Reduces the need for blood transfusions and iron supplements, improving quality of life.
- **Controlled Hormonal Regulation:** Provides targeted hormonal control, helping manage menstrual irregularities without systemic side effects.



Acknowledgement

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