



Key Points

Subfertility is common in women with liver disease. Assisted reproductive technology (ART) is becoming increasingly popular in this patient population.

We report the largest study to date of ART in patients with chronic liver disease (CLD).

We show ART in patients with CLD can be successful, and liver-related complications are uncommon.

Further data are needed to understand the relationship of ART with pre-term delivery in these patients.

Outcomes in Women with Chronic Liver Disease Undergoing Infertility Treatment

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Methods

- Retrospective analysis of all adult women with chronic liver disease (CLD) who underwent assisted fertility at UCSF between 2010 and 2022
- Patient demographics, medical history, liver tests, hepatitis B or C viral load, and ART treatment and outcomes were extracted from the medical record
- Analyses were conducted in R (Version 4.0.1)

Results

Patient characteristics

- **48** women with CLD underwent 92 egg retrievals and 81 embryo transfers
- Average age at retrieval was **39.3** years
- Etiologies of CLD were HBV, NAFLD, HCV, AIH, and alcoholic cirrhosis

ART outcomes

Liver Disease	Pregnancy Rate	Live Birth Rate	Pre-term Rate
Hepatitis B	25/50 (50%)	19/24 (79%)	13/19 (68%)
NAFLD	11/29 (38%)	6/11 (55%)	6/11 (55%)
Other	3/5 (60%)	2/3 (67%)	2/2 (100%)

Maternal outcomes

- Liver enzymes rose in **5.6%** of cycles (median peak AST 121.5 IU/L, ALT 85 IU/L)
- Viral load rose in **5%** of patients with HBV
- No cases of ovarian hyperstimulation
- No maternal deaths occurred

Discussion

Conclusions

- ART in women with CLD can be successful, and liver-related complications are uncommon
- Patients with CLD may have increased risk of pre-term delivery

Limitations

- Single-center study
- Liver testing data not available for all patients

Next Steps

- Comparison of outcomes with matched controls without CLD who underwent ART