SUBENDOMETRIAL PLATELET-RICH PLASMA IMPROVES EMBRYO TRANSFER FEASIBILITY AND PREGNANCY OUTCOMES IN PATIENTS WITH POOR ENDOMETRIAL DEVELOPMENT

Law J (1),Contractor M (1), Milad H (1), Collins G (2)
(1) Loyola University Medical Center, Maywood IL, USA
(2) Wisconsin Fertility Institute, Middleton, WI, USA

Introduction

- Poor endometrial development can prevent embryo transfer and limit success in assisted reproduction (1).
- Platelet-rich plasma (PRP) has been explored as a regenerative adjunct to improve endometrial receptivity and restore transfer feasibility in difficult cases (2).
- This study evaluates whether subendometrial PRP administered at hysteroscopy improves the ability to proceed with embryo transfer and associated pregnancy outcomes.

Objectives

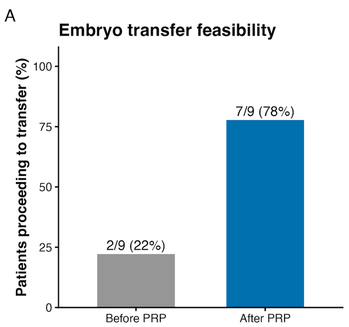
This study evaluates whether subendometrial PRP administered at hysteroscopy improves the ability to proceed with embryo transfer and associated pregnancy outcomes.

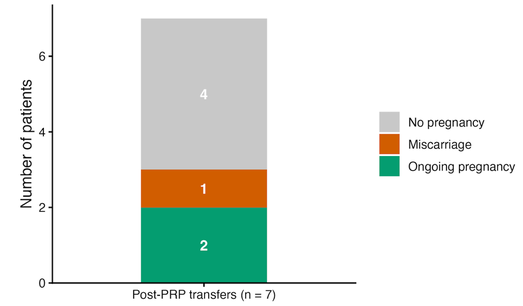
Methods

- Retrospective cohort study of nine patients undergoing hysteroscopy with PRP prior to IVF
- Outcomes assessed included ability to proceed with embryo transfer, biochemical pregnancy, and miscarriage rates before and after intervention.
- Patients were assessed in the context of poor endometrial development and related cavity abnormalities.

Results

- Subendometrial PRP appeared to improve embryo transfer feasibility in a small cohort of patients with poor endometrial development.





- Prior to PRP, 2 of 9 patients (22%) proceeded to embryo transfer
- After PRP, 7 of 9 patients (78%) underwent embryo transfer
- Among the 7 patients who underwent transfer post-PRP, 3 (43%) had a positive pregnancy test and of those pregnancies, 2 resulted in ongoing pregnancies and 1 ended in miscarriage
- Following PRP, several patients with prior transfer deferral were able to proceed with embryo transfer, including those with Asherman syndrome and intrauterine fluid.

Conclusion

- Subendometrial PRP may help overcome barriers to embryo transfer in patients with poor endometrial development.
- This intervention may be especially useful in patients with prior failed or deferred transfers due to cavity abnormalities.
- Improve transfer feasibility may translate into clinically meaningful pregnancy outcomes.
- These findings support further investigation in larger, prospective studies.

References

1. Genovese H, Mayo CA, Kalafat E, Fatemi H, Ata B, Garcia-Velasco J, Seli E. Does endometrial thickness impact live birth rate following a frozen embryo transfer: outcomes of 30 676 euploid single embryo transfers. Hum Reprod. 2025 Oct 1;40(10):1919-1927. doi: 10.1093/humrep/deaf129. PMID: 40639807.

2. Yang Y, Zhang X, Zhang Y. Platelet-rich plasma therapy for thin endometrium: a comprehensive review. Arch Gynecol Obstet. 2025 Sep;312(3):745-753. doi: 10.1007/s00404-025-08077-5. Epub 2025 Jun 12. PMID: 40504243; PMCID: PMC12374893.

3. Javaheri A, Kianfar K, Pourmasumi S, Eftekhar M. Platelet-rich plasma in the management of Asherman's syndrome: An RCT. Int J Reprod Biomed. 2020 Feb 27;18(2):113-120. doi: 10.18502/ijrm.v18i2.6423. Erratum in: Int J Reprod Biomed. 2021 Apr 22;19(4):392. doi: 10.18502/ijrm.v19i4.9068. PMID: 32259005; PMCID: PMC7097166.

4. Borrelli D, Zizolfi B, Foreste V, Di Spiezio Sardo A. A Step-By-Step Description of the Hysteroscopic Injection of Platelet-Rich Plasma (PRP) Into the Endo-Myometrial Junction For Patients With Asherman's Syndrome. J Minim Invasive Gynecol. 2026 Feb 7:S1553-4650(26)00102-0. doi: 10.1016/j.jmig.2026.02.013. Epub ahead of print. PMID: 41662906.

Acknowledgement

The authors would like to thank the clinical, embryology, and nursing team at Wisconsin Fertility Institute for their contributions to patient care and cycle coordination.

We also acknowledge the patients whose clinical experiences made this retrospective analysis possible.