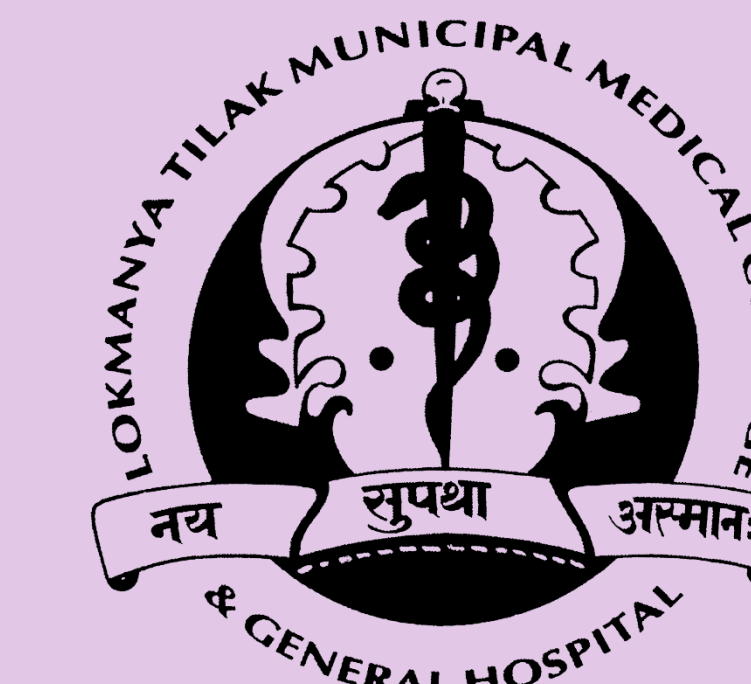




Building Families through Transplantation: A Systematic Review of Uterine Transplant Outcomes and Complications

Vidhi Vora, Pratik Agarwal, Yashendra Sethi



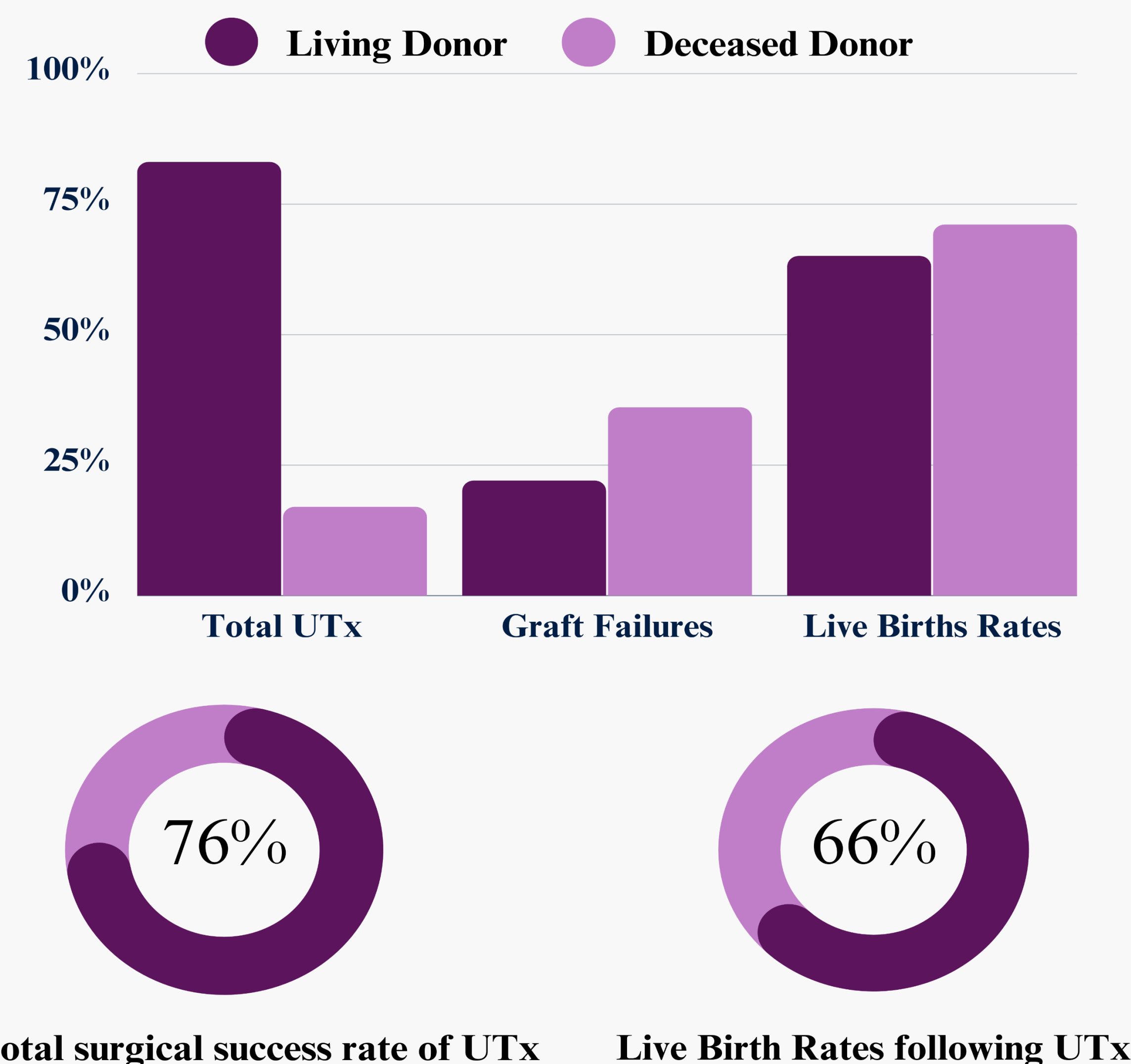
Introduction

- Uterine infertility - **1 in 500 women**.
- Current treatment options - in-vitro fertilisation with a gestational carrier or adoption – **inaccessible due to legal, cultural, and psychological** constraints.
- Uterine transplantation(UTx) has emerged as a viable solution.
- In this review, we compile the **varied clinical outcomes and major complications of UTx** in order to aid physicians and patients in making effective decisions.

Design & Methods

- A systematic review was carried out as per the Cochrane methodology and PRISMA guidelines (Figure 1) utilising the keywords “Uterus transplantation” “outcome” and “complication” searching the databases of PubMed, Embase, and Scopus from 2000 to 2022.
- We included all observational studies, case reports and reviews falling within the inclusion criterion.

Figure 2- Results

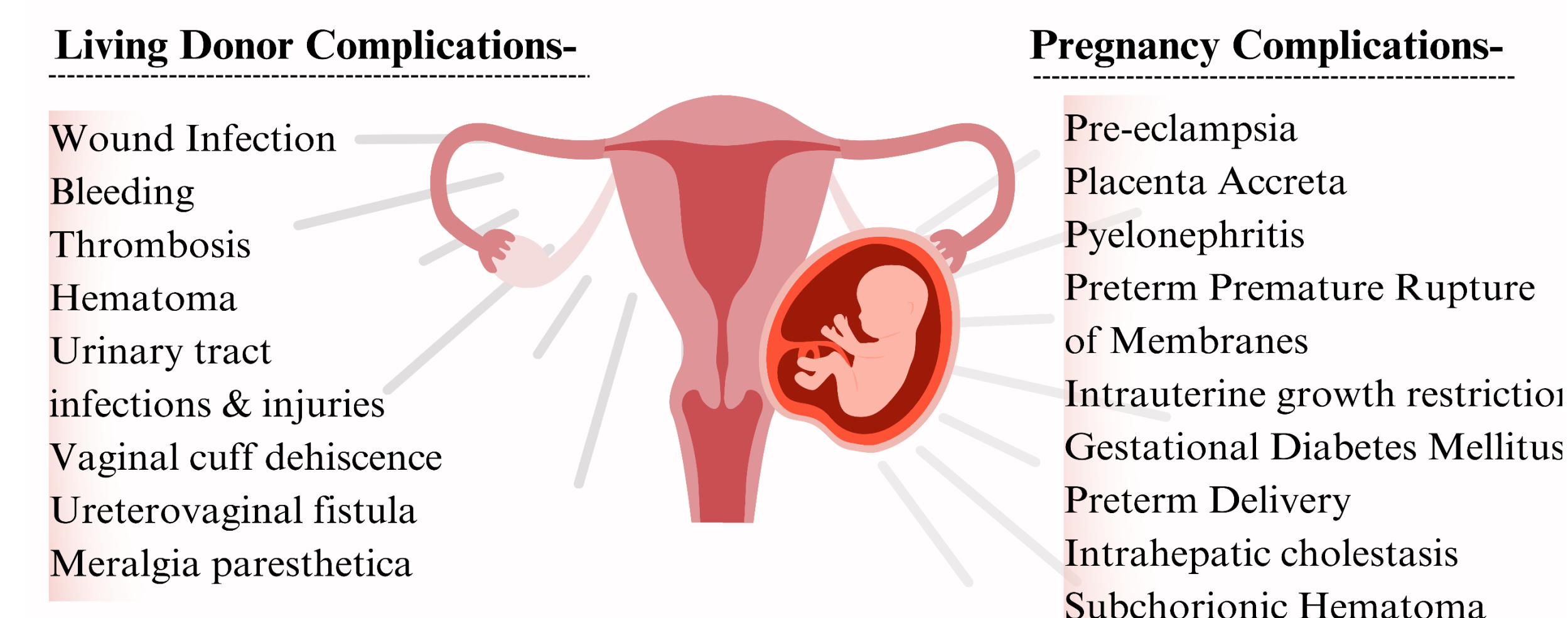


UTx- Uterine Transplantation

Results

- An estimated **80 UTx have been conducted with over 30 live births reported** till date. A **successful outcome** has been seen in about **76% cases** with a subsequent positive **live birth is estimated in 80%** of these cases.
- **Living donor transplantation** - higher success rates than deceased donor transplantation.
- Positive obstetric and transplant outcomes - inversely proportional to **donor age**.
- **Complications in living donors** - ureteric injuries, haemorrhage, ureterovaginal fistula, wound infection and urinary tract infections(UTIs).
- **Graft survival- 25- 30% required an emergency hysterectomy**, primarily due to graft thrombosis, infection or ischaemia.
- **Other complications in recipients** - vesicovaginal fistula, vaginal cuff dehiscence, vaginal stenosis, UTIs.
- **Obstetric complications** in pregnancy following UTx- Preterm birth - 62% pregnancies. Other complications- preeclampsia, intrahepatic cholestasis, pyelonephritis, subchorionic hematoma & placenta previa.

Figure 3- Complications



Conclusion

- Preliminary data on uterine transplant has shown **promising results but relatively high complication rates**.
- More research and clinical trials of UTx should be undertaken to further optimise and develop the process.

Future Directions

- The **data is currently very limited** and warrants more exploration.
- The solution to the problem of infertility is not far. UTx can be the next revolution in medical science.
- **Multicentric collaborative studies and trials** are required to contribute more data from different populations to weigh the risk-benefit ratio and ensure safety, best management practices, improved outcomes and continued advancement in UTx.

Bibliography

- Taherkhani S. “Differences between living and deceased donation in human uterus transplantation: A narrative review,” *Int J Reprod BioMed* 2023; 21: 193–204. <https://doi.org/10.18502/ijrm.v21i3.13195>
- Brännström M, Belfort MA, Ayoubi JM. Uterus transplantation worldwide: clinical activities and outcomes. *Curr Opin Organ Transplant*. 2021;26(6):616-626. doi:10.1097/MOT.0000000000000936