

Intrauterine transfusion for fetal anemia: Our 8 year experience.

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DESIGN

This is a single- centre, retrospective observational study of fetuses with severe anemia treated with. Intrauterine fetal transfusion (IUT) from January 2014 to December 2022 at AIMS - Kochi, India, a tertiary care facility. The influence of gestational age, the technique of transfusion and hydrops on the procedural outcomes and complications were studied along with postnatal outcomes of these fetuses.

METHOD

33 fetuses with severe anemia (>1.5 MoMs) treated by IUT were included. The Hospital's electronic information system (HIS) and telephonic follow-ups were used to obtain the outcomes until 3 months post discharge. Our statistical analysis were done using the IBM SPSS Statistics 20 software..

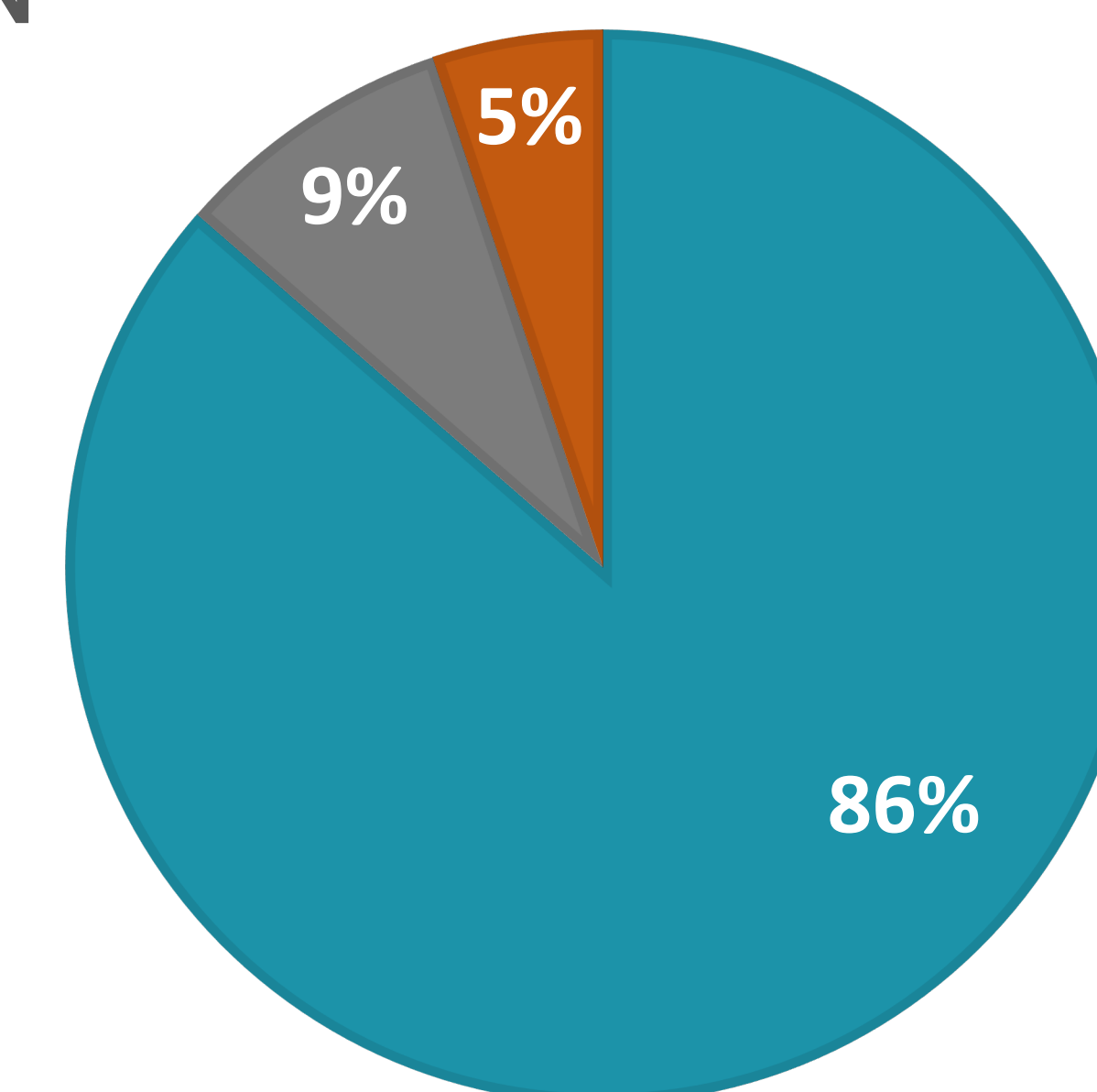
RESULTS

- 59 IUT'S were performed in 33 fetuses, of which 43.8% needed one and 34.4% needed a second transfusion.
- Rh isoimmunization formed majority of the cases , Anti D (81.8%) and minor antigens contributing to 12.2%.
- 6% of the cases were due to Non immune hydrops.
- The median gestational age at transfusion was 28 weeks, earliest being 19 week.
- Hydropic fetuses required an earlier transfusion.
- The pre procedure Hb in hydropic fetuses requiring IUT was lower (mean of 5.5) than non hydropic (mean - 7.9) (as expected.)

- Route of transfusion: Combined UV with intraperitoneal transfusion were done in 5% fetuses, in view of thin umbilical cord at earlier gestations.

ROUTE OF TRANSFUSION

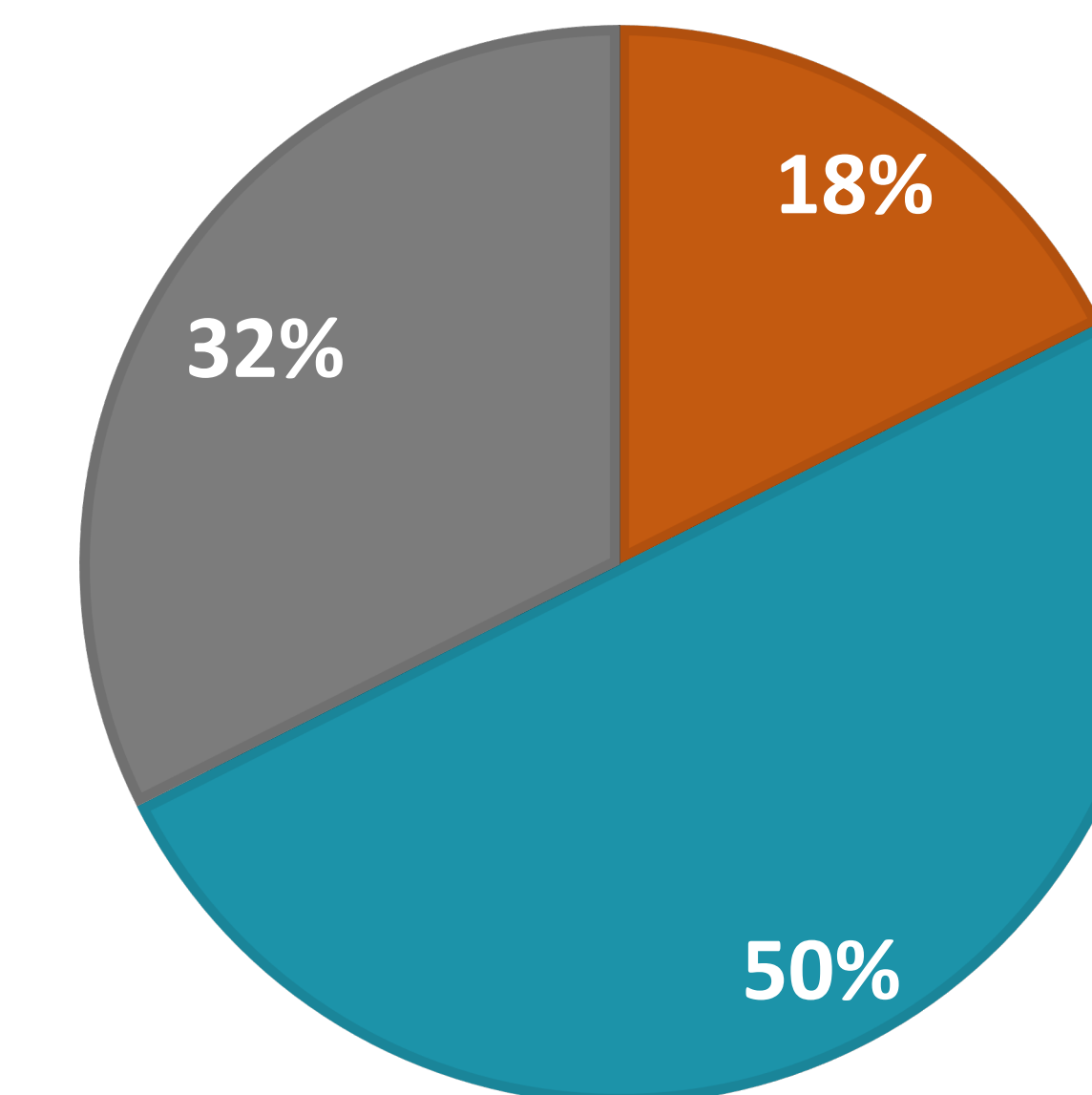
- Umbilical vein
- Portal vein
- Umbilical vein + Peritoneal cavity



- The procedure related complications were: Bradycardia, intra peritoneal spill, preterm premature rupture of membranes and intrauterine demise. Three fetuses with bradycardia ended in IUD within 24 hours.
- Statistically significant procedure related adverse effects were noted in i). Early gestational age of transfusion ii) hydropic fetuses iii) intraperitoneal transfusion.
- The median age of delivery was at 35 weeks of gestation with 76.7% delivering preterm, with a median baby weight of 2.6 kg.
- Postnatally, all the babies needed intensive phototherapy. 24 needed packed RBC transfusion and twelve needed additional therapy with 33.3 % - exchange transfusion,
- 25%- IV Ig, 33% FFP and 8% needing both exchange and IV Ig therapy.
- Neonatal late anemia (within 3 months) needing transfusion was seen in 28%
- Overall, good outcome was noted in 82.4% cases.

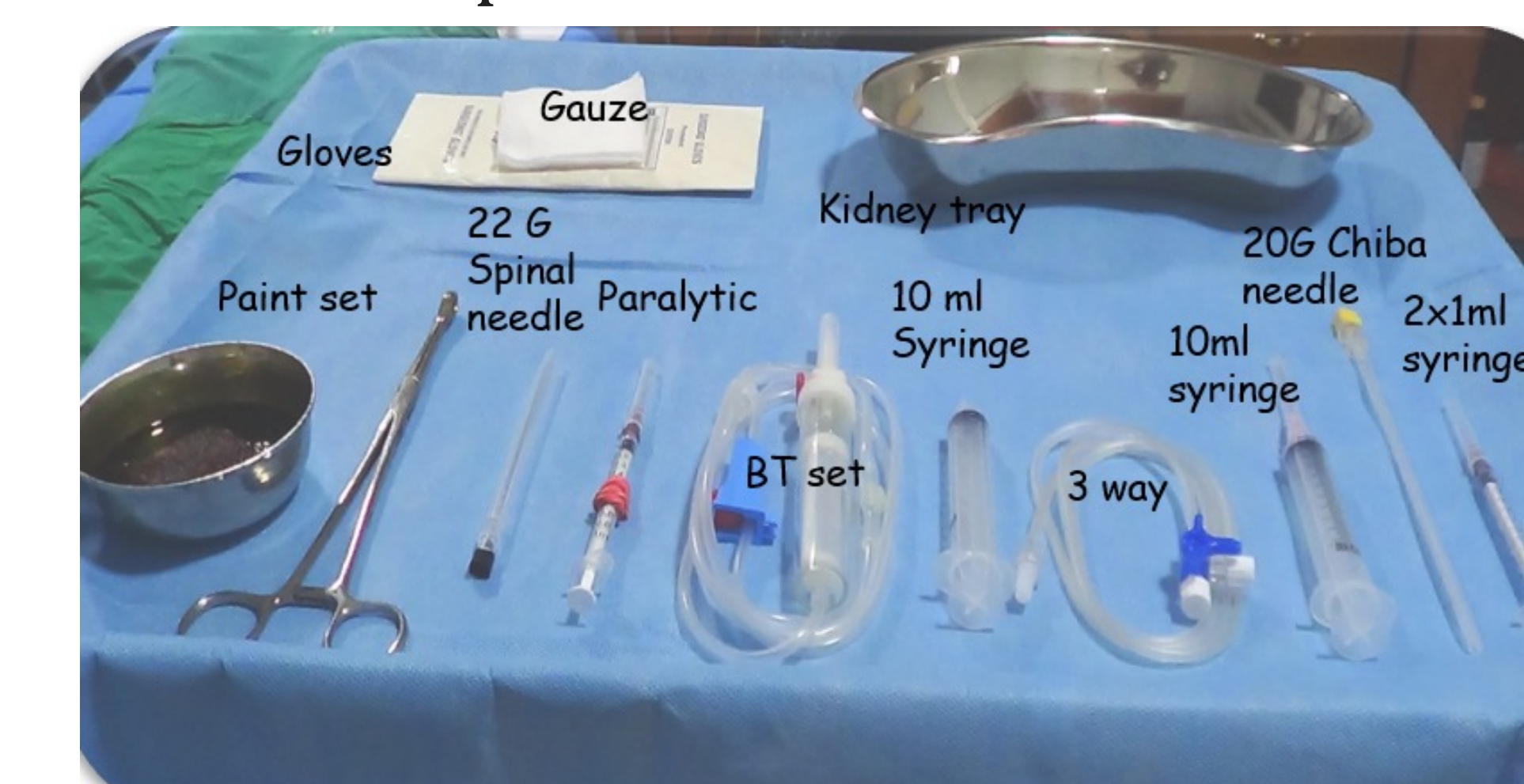
TIMING OF DELIVERY

- Term (>37 weeks)
- Late preterm (34- 36.6 weeks)
- Early preterm (<34 weeks)



CONCLUSION

- In experienced hands, IUT is a safe, life saving procedure.
- Earlier gestational age of the transfusion, intraperitoneal route of transfusion and hydropic fetuses had a higher procedure related adverse effect, thus requiring a specialist centre care.
- Monitoring for atleast 3 months postnatally to detect late fetal anemia showed improved neonatal outcomes.



Umb V - CI
➔



Umb V/PV - Intra-hepatic
➔