

INDIAN FERTILITY SOCIETY

SIG Newsletter

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Ultrasound





Dr Prof (Col) Pankaj Talwar, VSM, MD, PhD. President. IFS



Dr Ashok Khurana Mentor - SIG



Dr (Prof) Shweta Mittal Gupta, MD, DNB, FNB, MNAMS Secretary General, IFS



Dr Bharti Jain Convenor - SIG



Dr Rupali Bassi Goyal Editor, IFS



Dr Ritu Khanna Co Convenor - SIG



Dr Nymphaea Walecha Joint Editor, IFS



Dr Ladbans kaur Co Convenor - SIG

Multifetal Pregnancy Reduction

Dr. Ladbans Kaur MD Radiodiagnosis, Prime Diagnostic Centre, Chandigarh

Multifetal pregnancy reduction is seen as protecting health and minimizing harm, by maximizing the woman's health and the health of her surviving neonates.

Over the past several decades, the increased use of assisted reproductive technology (ART) has led to a dramatic increase in the incidence of multifetal pregnancy upto the tune

of 30-50%. Although not all multifetal pregnancies occur after the use of ART or other fertility treatments.

The risks of perinatal as well as maternal morbidity and mortality increase with the presence of each additional foetus.

Spontaneous multifetal pregnancies have always posed increased medical risks to pregnant women and their foetuses.

The infants born are at increased risk of prematurity, cerebral palsy, learning disabilities, slow language development, behavioural difficulties, chronic lung disease, developmental delay, and death.

Maternal risks of multifetal pregnancies include hypertension, preeclampsia, gestational diabetes, and postpartum haemorrhage.

There also are significant economic adverse effects of multiple pregnancies, such as the need for additional childcare, greater household and medical expenditures.

Fetal reduction is the practice of reducing the number of fetuses in a multifetal pregnancy, say quadruplets, to a twin or singleton pregnancy.

Approach to Multifetal Reduction:

The reduction procedure is generally carried out during the first trimester of pregnancy from 11- 14 weeks of gestation.

Detailed ultrasound checking for number, viability, chorionicity and detailed morphological assessment of all the foetuses is done prior to the procedure.

Pre-Procedure Checklist:

- Preprocedural counselling and written informed consent taken prior to procedure.
- Documentation in accordance with PCPNDT Act.
- FORM F to be completed.
- TICK ON NO 21 AS INDICATION FOR INVASIVE PROCEDURES.
- Section 5 is to be filled and marked on "Any other (specify)."
- FORM G (For Invasive procedure) to be filled.
- Confirm maternal Rh Status.
- In case the mother is on aspirin/ anticoagulants like heparin, it is advised to be stopped one day prior and one day post procedure.
- No clear evidence on advocation of prophylactic Antibiotics. Some authors advocate one dose of antibiotic prior to needle entry.
- There is no role of Tocolytics.

Criterion for Selection of the foetus:

- Foetuses with features of aneuploidy and those with a significantly smaller crown-rump length (CRL) are preferentially chosen for selective reduction.
- When all the foetuses appear structurally normal, the decision is based on the technical aspect. The fetus closest to the fundus/ anterior abdominal wall is selected.
- Try to avoid placenta, Fibroids, Haematomas.

Procedure:

Under ultrasound guidance 22G needle is introduced transabdominally through the maternal abdomen and the uterine wall into the thorax of the selected fetus (Figure-1).

2ml of Potassium chloride is injected into the cardia of the selected fetus and observe for asystole on colour or power Doppler modes (Figure-2).

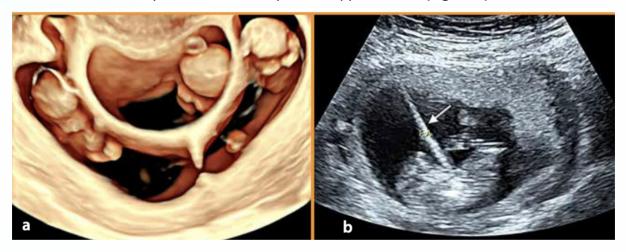


Figure-1: Transvaginal volume rendered three dimensional HD live image shows Trichorionic Triamniotic gestation of 11-12 weeks (a). Potassium chloride is injected via 22 G needle (arrow) introduced into the thorax of the selected fetus (b).



Figure-2: Fetal reduction showing asystole in the selected fetus **(Fetus C)** on power Doppler a. Other two fetuses **(Fetus A)** and **(Fetus B)** show viability on power doppler **(b)**. **Complications of Fetal Reduction:**

- May experience mild cramps.
- Spotting / bleeding.
- Leakage of Amniotic fluid.
- Infection.
- Miscarriage < 24 weeks

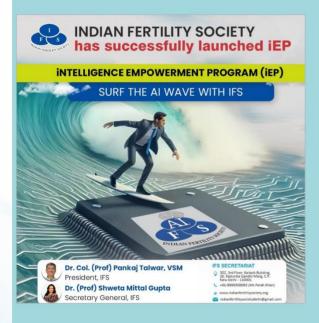
Post Procedure checklist:

- Post procedure check scan after 3 hours
- Anti D as indicated in Rh negative
- Analgesics: Not recommended
- Limited physical activity is optional.
- Follow-up ultrasound examination after 24 hours is recommended.
- Targeted scan 18 -20 weeks
- Follow up as twin / singleton pregnancy

Women receiving fetal reduction encounter difficult decision and tremendous emotional stress. It is important to strategize approach for multifetal pregnancy towards prevention to reduce high order gestation. We should limit the embryos per transfer. Fetal reduction therefore is justified, safe and effective and should be performed to preserve the life of remaining fetuses.

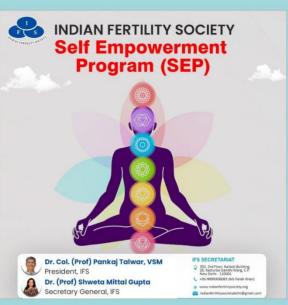
















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How to Become an **IFS Member**





Dr. Prof (Col) Pankaj Talwar, VSM Dr. (Prof) Shweta Mittal Gupta President, IFS

Secretary General, IFS



For any Information, Contact

L +91 9899308083

indianfertilitysocietydelhi@gmail.com





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