

Fetal Losses in Embryo Recipient Goats Supplemented with Progestogens

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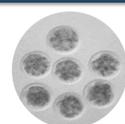
INTRODUCTION & AIM

In small ruminants, **early gestational losses** represent up to 40% of total pregnancy losses and have been associated with inadequate progesterone levels.

Progesterone supplementation has been proposed to improve early pregnancy maintenance; however, results have been inconsistent.

This study evaluated *the effect of progestogen supplementation post embryo transfer on pregnancy rate, embryo, fetal, and neonatal survival in goats.*

METHOD



207 thawed Angora embryos



Semi-surgical transfer

111 Criolla Neuquina goats
(Day 0= Embryo transfer)



Progestogen supplementation

(intravaginal sponges-60 mg MAP)
replaced every 17 days for 68 days
n= 37

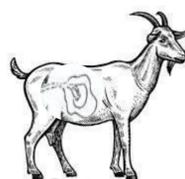
Non-progestogen supplementation

(Control)
n= 74



Pregnancy diagnosis

(Ultrasonography)
Days 28



Embryo survival: viable embryos/transferred embryos

Fetal survival: viable fetuses/viable embryos



Birth Control

Days 147

Neonatal survival: kids born alive per viable fetuses

All procedures were conducted under standardized conditions with the same operators and genetic material.

RESULTS & DISCUSSION

Table 1. Effect of intravaginal progestogen supplementation on pregnancy rate and embryo, fetal, and neonatal survival in transferred goats with cryopreserved embryos.

Treatments	Pregnancy (%)	Embryo survival (%)	Fetal survival (%)	Neonatal survival (%)
Progestogen supplementation	41 (15/37)	36 (24/67)	29 (7/24)	29 (7/24)
Non-progestogen supplementation	43 (32/74)	31 (43/140)	100 (43/43)*	100 (43/43)*

*Differs significantly from progestogen supplementation ($P < 0.05$; Fisher's exact test).

Unequal n per treatment resulted from greater number of recipients assigned to the conventional embryo transfer protocol.

No significant differences were observed in pregnancy or embryo survival ($P > 0.05$).

However, fetal and neonatal survival were markedly lower in the progestogen supplementation treatment ($P < 0.05$).



Angora kid born from Criolla recipient

Laboratory analyses ruled out *Brucella melitensis*, CAEV, and *Toxoplasma gondii* in affected fetuses and dams.

Possible mechanisms postulated in fetal losses comprise a sharp decline in progesterone after sponge removal or increased oxytocin and prostaglandin due to vaginal mechanical stimulation, inducing luteolysis.

CONCLUSION

Progestogen supplementation via intravaginal sponges is not recommended for recipient goats in embryo transfer programs.

Acknowledgements

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