Summary and Conclusion

The fetal membarnes are interposd between the fetal compartment and maternal compartment. Thus, they are ideally positioned to regulate signals for initiation of labour.

The contractions of myometrial smooth muscle cells are dependent on the action potentials, so, the voltage-dependent calcium channels (VDCCs) play a critical role in the regulation of uterine contractility.

The aim of the present study was to find out the effect of fetal membarnes on uterine contractility (basal and stimulated) of non pregnant and pregnant rats, and 2) the effect of calcium channels on uterine contractility (basal and stimulated) of non pregnant and pregnant rats.

Uterine horns were obtained from non pregnant and pregnant adult female rats. Each preparations was mounted in 100 ml isolated organ bath in Ringer;s-lock solution at temperature 37 °C and pH 7.4 and aerated with oxygen. Uterine contractions were recorded using two channels oscillograph with isotonic transducer Fc 117.

Experiments of this work included three main groups I, II, III

Group I :

Studied the effect of FM (FTFM and MFM) on basal and stimulated uterine contractions (by $PGF_{2\alpha}$ and OT) of non pregnant

and pregnant rats [groups I-1-(A), I-1-(B), I-2-(A), I-2-(B) and I-3-(A), I-3-(B)].

Group II :

Studied the effetct of CCB (nifidipine) on basal and stimulated uetrine contractions (by $PGF_{2\alpha}$ and OT) of non pregnant and pregnant rats [groups II-1-A), II-1-(B), II-2-(A), II-2-(B) and II-3-(A), II-3-(B)].

Group III :

Studied the effect of FTFM and CCB (nifidipine) on basal uterine contractions of non pregnant and pregnant rats groups III-(A) and III-(B)].

Results revealed : (1) FM (FTFM and (MFM) significantly decreased basal uc of non pregnant and pregnant rats. (2) FM (FTFM and MFM) significantly decreased stimulated uc by $PGF_{2\alpha}$ of non pregnant and pregnant rats, (3) FM (FTFM and MFM) insignificantly decreased stimulated uc by OT of non pregnant and pregnant rats. (4) CCB (nifidipine) significantly decreased basal uc gradually (in a dose concentration method) until completely inhibited of non pregnant and pregnant rats. (5) CCB (nifidipine) significantly decreased stimulated uc by $PGF_{2\alpha}$ gradually (in a dose concentration method) until completely inhibited of non pregnant and pregnant rats (6) CCB (nifidipine) significanly (in a dose concentration method) until completely inhibited (but at higher doses than that in uc stimulated by $PGF_{2\alpha}$) of non pregnant and pregnant rats. (7) FTFM with CCB (small dose) produced complete inhibition of basal uc.

Therefore we can conclude that :

(1) FM (FTFM and MFM) produce inhibitory effect on basal uc of non pregnant and pregnant rats because FM release inhibitor act specifically at L-Ca^{++} channels.

(2) FM (FTFM and MFM) inhibit $PGF_{2\alpha}$ stimulated uc not O T stimulated uc.

(3) CCB (nifidipine) inhibit basal uc gradually until complete stoppage of uc in a dose concentration method.

(4) CCB (nifidipine) inhibit stimulated uc by $PGF_{2\alpha}$ and O T gradually until complete stoppage of uc in a dose concentration method but uc stimulated by O T need large dose of CCB to induce stoppage.

(5) FM decrease dose of CCB (nifidipine) to induce stoppage of uc due to its inhitory effect on uc.