Efek pentagamavunon-0 terhadap konsentrasi cAMP dan progesteron pada kultur sel luteal yang mengandung teofilin.

Abstrak

Curcumin analog (Pentagamavunon-0/PGV-0) can inhibit steroidogenesis of luteal cell culture. Corpus luteum secretes progesterone by LH stimulation. The main transduction signal of luteal cells steroidogenesis is through the cAMP/PKA. The objective of this study was to know the effect of PGV-0 on cAMP and progesterone concentration of luteal cell culture containing theophylline. The subject was corpus luteum of rat Sprague Dawley strain induced with PMSG (10 IU). PGV-0 was given shortly after the stimulation of LH and or PGF2α with or without theophyline. The cell culture then put into the incubator for 24 hours. Concentration of cAMP was assessed by ELISA whereas the progesterone concentration was determined by RIA. The result showed that LH stimulation caused cAMP and progesterone increase significantly. The inhibition of PGF2α on cAMP and progesterone concentrations showed no significant difference compared to the control. Theophylline increased the cAMP and progesterone concentration significantly but not to LH stimulation. PGV-0 did not inhibit cAMP concentration but PGV-0 inhibited the progesterone concentration by LH stimulation. In conclusion, PGV-0 inhibits signal transduction of lutheal cell in down stream cAMP.