Assisted reproductive techniques result in a deficient luteal phase which requires administration of exogenous progesterone intramuscularly, intravaginally or orally for support. The oral route is preferred by most patients but oral progesterone for luteal support has had poor outcome. Dydrogesterone, a retro-progesterone, has superior bioavailability compared to its oral antecedents. There has been limited review on the use of dydrogesterone for luteal phase support in ARTs in a large sample of women, in terms of pregnancy outcomes and safety profile. This paper aims to review the outcomes using dydrogesterone for luteal phase support in assisted reproductive cycles in a tertiary hospital in Singapore. We reviewed 1050 women who underwent IVF/ICSI between year 2000 to 2011 and who were prescribed dydrogesterone for luteal phase support. Primary outcomes measured were pregnancy, live birth, miscarriage and fetal anomaly rates. The mean age of our sample group was 35 years old. 34.7% of them were pregnant, amongst which 27.7% had live births while 5.9% miscarried spontaneously. Structural anomalies were detected in 1.9% of the pregnancies. Dydrogesterone is a promising option for women who are more comfortable with the oral route. Further studies need to be undertaken to evaluate the optimal dosage of dydrogesterone for luteal phase support in fertility treatments.