Management of Luteal Phase Defect in Adolescent Girls

Dilip Kumar Dutta, Indranil Dutta

ABSTRACT

Objective: To find out the effect of dydrogesterone drug on menstrual cycle of adolescent girl.

Study design: A total of 50 adolescent girl (16-19 years) who were suffering from irregular menstruation were recruited for this study from April 2008 to February 2009, at JNM Hospital, Kalyani, West Bengal, India.

Results: Menstrual cycle was found to be regular within 6 months of treatment along with the reduction of endometrial thickness.

Conclusion: Dydrogesterone was found to be safest drug to regularize menstrual cycle of adolescent girl suffering from menstrual irregularity due to luteal phase defect.

Keywords: Adolescent, LPD, Menstrual irregularity, Dydrogesterone.

INTRODUCTION

Although luteal phase defect (LPD) was found to be a significant cause of some cases of unexplained infertility (3.5%) and recurrent miscarriage (35-50%) but recently due to improvement of clinicoendoultrasonography profile, LPD due to anovulation and dysovulation of ovary caused by an incomplete maturation of hypothalamic-pituitary-gonadal axis, was found to be leading cause of menstrual irregularities in adolescent girl. In the past and even now controversies exist about the diagnosis of LPD and the validity of luteal supplementation for ‘so-called’ inadequate luteal phase, but it is true fact that if we fail to diagnose and treat LPD in adolescent girl in accurate time, it may directly affect her future reproductive health. Hence, prevention and treatment of LPD in adolescent girl is very much significant by advocating suitable progestins without hampering her endocrinal, metabolic and hematological system.

MATERIALS AND METHODS

This study was undertaken at JNM Hospital from April 2008 to February 2009. Fifty adolescent girl, aged 16 to 19 years with a history of irregular menstruation [who were treated previously by micronized progesterone (25 cases) and synthetic progesterone (25 cases) but failed to regularize menstrual cycle] were diagnosed to be suffering from LPD [diagnosed by basal body temperature (BBT), serum progesterone and endometrial thickness (USG)] were selected for this study. Dydrogesterone (10 mg) was advocated BD from day 11 for 14 days for 6 cycles. The aims of the study are (1) to find out the effect of drug on menstruation (2) to see any change on endometrial thickness (3) any change on breast.

RESULTS

Ninty percent of cases were from age group 18 to 19 years of age (Table 1).

Seventy-eight percent cases had history of menorrhagia as compared to 16% cases oligomenorrhea and 6% cases of polymenorrhea, 22% cases had mystalgia and 5% cases had breast lump (Table 2).

DIAGNOSIS (N = 50)

Eighty-two percent cases had elevated with discordant BBT (Table 3), might be due to fluctuating serum progesterone level. Eighty-eight percent cases had serum progesterone level less than 10 ng/ml, 7 days prior to menstruation and 82% cases had endometrial thickness more than 12 mm on 10th day of period due to endometrial hyperplasia caused by hyperestrogenemia.

It is interesting to observe that (Table 4) menstrual cycle—was found to be normal in 16% cases within 3 cycles, 20% cases within 4 cycles, 28% cases within 5 cycles and 32% cases within 6 cycles. Only 4% cases had undergone curettage due to failure to respond to treatment.

Endometrial thickness (Table 5) were found to be significantly less than 8 mm in 88% cases, less than 10 mm in 12% cases signifying that presence of unopposed estrogenic effect, mystalgia was found to be nil and no lump were detected on palpation of both breast.

DISCUSSION

Luteal phase defect (LPD) due to anovulation and dysovulation, marked by incomplete maturation of HPG-axis, was found to be leading cause of menstrual irregularities menorrhagia (73%), polymenorrhea (16%) and oligomenorrhea (6%) and mystalgia (16%) in adolescent girl.

In the past and even now controversies exist about the diagnosis of LPD in spite of well-known etiological factors. The accepted diagnostic parameters are (1) ‘out of phase’ endometrium as revealed on two consecutive premenstrual
endometrial biopsies, low midluteal progesterone levels, and disparity of endometrial thickness by ultrasound (USG) could be more convincingly established on the basis of LPD. Histological evidence of ‘out of phase’ endometrium of less than 10 to 12 ng/ml 1 week prior to menstruation, luteal phase defect of adolescent girl. This regime not only regularized the menstrual cycle but also found to have no side-effects to endocrinal, metabolic and hematological system of adolescent girl.

## REFERENCES


## ABOUT THE AUTHORS

**Dilip Kumar Dutta**  
Consultant, Department of Gynecology, JNM Hospital, Nadia, West Bengal, India

**Indranil Dutta**  
Junior Resident, Department of Obstetric and Gynecology, JNM Hospital, Nadia, West Bengal, India

## CORRESPONDING AUTHOR

Dilip Kumar Dutta, Consultant, Department of Gynecology, A/9/7 Kalyani, Nadia-741235, West Bengal, India, Phone: 03325829709 09433032986, 09330925898, e-mail: drdilipdutta@yahoo.com