

Untreated luteal phase deficiency as another possible risk factor for preterm delivery

To the Editors: We read with interest the article by McGregor et al. (McGregor JA, French JI, Richter R, et al. Antenatal microbiologic and maternal risk factors associated with prematurity. AM J OBSTET GYNECOL 1990;163:1465-73). Risk factors for prematurity included infectious causes, maternal medical problems, antepartum treatment for urinary tract infection, prior preterm delivery, bacterial vaginosis (all of which were positively associated with preterm delivery), and factors of maternal age, prior abortion (therapeutic or spontaneous), and fetal sex. Although only 9 (4.5%) of 202 women were delivered at <37 weeks, certain small groups seemed to be associated with higher risks: women aged 30 to 38 years (2/20, 10%), prior preterm birth (4/21, 19%), and *Mycoplasma hominis* infection (3/18, 17%).

We evaluated 540 women who had preterm histories of luteal phase defects but who were eventually able to conceive; 82 (15%) of 540 were delivered at <37 weeks' gestation. This relatively high rate (compared with 4.5% in the study of McGregor et al.) might be attributed to a relatively older group of women (mean age 32 years). We divided the 540 patients into three groups: 32 patients who refused the suggested progesterone therapy (group 1), 469 women who had progesterone therapy for ≥ 12 weeks (group 2), and 39 patients who took progesterone for ≥ 6 but <10 weeks (group 3). The rates of prematurity (<37 weeks) were 31.2% for group 1, 13.7% for group 2 ($p < 0.05$ comparing groups 1 and 2), and 10.3% for group 3. The rates of severe prematurity (<32 weeks) were 12.5% for group 1, 1.3% for group 2 ($p < 0.01$ comparing groups 1 and 2), and 2.6% for group 3. The number (mean \pm SE) of days delivered early was -16.0 ± 26.8 for group 1, compared with -7.3 ± 13.0 in group 2 and -5.5 ± 16.1 in group 3 ($p < 0.01$ comparing group 1 with either group 2 or group 3). No significant differences (mean \pm SE) were found in birth weights (3113 ± 874 gm for group 1, compared with 3240 ± 679 gm for group 2 and 3440 ± 646 gm for group 3).

These data, we believe, support the addition of luteal phase defects to the list of risk factors for preterm delivery. Depending on the population studied, progesterone therapy during the first trimester could prove to be one method of preventing preterm delivery.

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