The objective of this study was to assess the efficacy of prostaglandin F$_2$α, to treat clinical endometritis (CE) in dairy cows under commercial conditions. A longitudinal study was conducted in one dairy farm in Argentina which housed 6326 Holstein cows (1 lactation, n=2053; ≥2 lactation, n=4273) that calved from January 2007 through December 2008. Each postpartum cow was examined for diagnosis of clinical endometritis (CE) once between 15 and 45 days postpartum (dpp) at a monthly herd visit. At examination (EX1), cows were first inspected for presence of fresh and/or dry discharge on the vulva, perineum, or tail; and then the mucus content of the vagina was evaluated for color, proportion of pus to mucus, and odor; and a score was assigned as follows: clear mucus (CE0), predominantly clear with flecks of pus (CE1), purulent but not foul-smelling (CE2), or purulent or red-brown and foul smelling (CE3). Cows diagnosed CE0, were not treated; cows diagnosed with CE1 and CE2 were randomly assigned to one of two treatments (placebo, PLA; PGF, cloprostenol, 0.150 mg i.m., Ciclase®, Syntex SA, Buenos Aires, Argentina); and cows with CE3 were treated with an antibiotic (oxytetracycline, 12 g, i.m., Terramicina LA®, Pfizer SA, Buenos Aires, Argentina) and PGF. All cows were re-examined (EX2) following the same criteria at the next monthly visit (30 d) to determine the outcome of treatment. The median interval from calving to EX1 was 30.5±0.1 d, to EX2 55.4±0.2 d, and between examinations was 30.0±0.1 d. First lactation cows had higher prevalence of CE compared to 2+ lactation cows (37% vs.24%, P<0.01). Significant differences in prevalence of CE were found between seasons (summer [32%], fall and spring [28%], winter [25%]); P<0.01) and between years (2007 [27%], 2008 [30%]; P<0.01). Cows with abnormal calvings had 16% more CE compared to cows with normal calvings (42% vs. 26%; P<0.01). The shorter the interval from calving to EX1, the higher the prevalence of CE (14-20 d, 58%; 21-27 d, 37%; 28-34 d, 23%; 35-41 d, 17%; 42-48 d, 15%; 49-55 d, 17%; P<0.01). At EX1, the prevalence of CE0 was 72%, of CE1 14%, of CE2 10%, and of CE3 4%. At EX2, 75% of cows with CE1, 62% of cows with CE2 and 59% of cows with CE3 were cured (CE0). Cows in PLA and PGF had the same cure rate for CE1 (74% [294/396] vs. 76% [183/240]; P>0.10) and for CE2 (61% [231/379] vs. 64% [179/279]; P>0.10). Cows with CE1 had a higher cure rate compared to cows with CE2 (75% [477/636] vs. 62% [410/658]; P<0.01). In conclusion, first lactation cows, cows with abnormal calvings, cows with summer puerperium, and cows with shorter interval from parturition to EX1 had higher prevalence of CE. Cows with CE1 and CE2 had a 75% and 62% cure rate after treatment with PGF, and cows with CE3 had a 59% cure rate after treatment with ATB and PGF. The use of PGF was not effective to improve the cure rate in CE1 and CE2.

Keywords: Clinical endometritis, postpartum examination, prostaglandins, cure rate