



A comparison of gonadotropin-releasing hormone and human chorionic gonadotropin in dairy cows with ovarian follicular cysts

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Cystic ovarian disease is a common condition of postpartum dairy cattle that has a significant impact on the reproductive efficiency, if not rapidly identified. This is important for the sustainability of the dairy industry. As reproductive efficiency is a key determinant and producer profitability. This Knowledge Summary compares the evidence for two well-known treatments for cystic ovarian disease. We investigated the following PICO question, an adult dairy cows with ovarian follicular cysts, does treatment with gonadotropin-releasing hormone GnRH compared to treatment with human chorionic gonadotropin or hCG result in a more rapid return to cyclicity the literature search elicited a total of 87 publications. However, many articles did not compare GnRH and hCG treatments directly, or they did not utilize time as an outcome and were excluded from this Knowledge Summary in order to be included, articles needed to have identified ovarian follicular cysts of 25 millimeters or larger and demonstrated a persistence of at least one week using transrectal ultrasound or palpation.

Additionally articles were required to have treated cystic ovarian follicles with GnRH and hCG therapy. A total of six publications were included once the duplicates were removed, those studies evaluated a wide variety of outcomes. In this Knowledge Summary, we focused on those related to time and studies that evaluated clinical care simply as a return to oestrus, the results were split two articles favoring hCG, and two showing GnRH was more effective. One study evaluated clinical care luteinisation of the cystic ovarian follicle, and they found hCG luteinised, roughly 20% more cows than GnRH articles that studied interval to conception resulted in contradictory evidence as well. With two studies, finding hCG treatment protocols required fewer days to conception. And two studies finding that GnRH had a shorter interval to conception five out of six studies evaluated recovery time as the days to first oestrus. And while there were no biologically or statistically significant differences, the majority of articles did find that hCG required fewer days to first oestrus than GnRH. There was one article with conflicting results and another that listed their responses as a range of days, the first oestrus for each treatment. And there was such significant overlap between them that no difference could be confidently identified in conclusion at this time there's insufficient evidence to suggest whether GnRH or hCG is a more efficacious for treating ovarian follicular cysts. Ultimately further research is essential to elucidating, which treatment results in a more rapid return to cyclicity for those dairy cattle afflicted with cystic ovarian follicles.

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