

Studies on Accurate Diagnosis on Reproductive Failures of Dairy Cows by Ultrasonography

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Introduction: In this study, we carried out ultrasonography to diagnosis reproductive failures more closely with rectal examination and to give basic information on diagnosis of reproductive failure.

Materials and methods: Diagnosis on reproductive failures of dairy cows by ultrasonography was performed for 151 dairy cows. To diagnose types of reproductive failures, ultrasonography (SA 600, Medison, 5.0 MHz rectal linear transducer) was carried out in combination with rectal examination. Of 151 dairy cows, pregnant cows were 13 and the cows in normal estrual cycle were 40 cows, thereby the cows with reproductive failures were 98 cows.

Results: 1. Of 98 cows with reproductive failures, the cows with ovarian diseases were 34 cows (34.7%) and the cows with uterine diseases were 41 cows (41.8%). 2. The diameter of follicle in proestrus was 1.94 cm and it was longer than that of follicle in diestrus ($p < 0.05$). 3. The mean size of corpus luteum of pregnant cows was bigger than that of corpus luteum in normal diestrus ($p < 0.05$). 4. The length of cystic corpus luteum was 3.26 and the width of that was 1.91 cm. The length of corpus luteum tissue was 1.95 and the width of that was 1.91 cm excluding the size of cavity in corpus luteum. 5. The mean length of follicular cyst was 3.31 and the mean width of that was 2.3 cm.

6. The mean length and width of luteal cyst was 3.45 and 2.25 cm, respectively. The mean length and width of corpus luteum tissue was 1.15 and 0.67 cm, respectively, excluding the size of cyst in the luteal cyst. 7. The width of uterine horn associated with endometritis was significantly reduced as the period after parturition was elapsed ($p < 0.05$). The mean width of uterine horn within 40 days after parturition was 4.55 cm.

Clinical relevance: These results indicated that ultrasonography is of great use for accurate diagnosis both on ovarian diseases and uterine diseases and that it is very effective to diagnose endometritis in dairy cows.