INTESTINAL ATRESIA: A SIGNIFICANT UNDER-DIAGNOSED CAUSE OF PERINATAL MORTALITY IN DAIRY HERDS?

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Congenital defects of calves have traditionally been recognised as a sporadic cause of mortality. However, it is possible that such defects occur at a higher, but unrecognised, incidence. This hypothesis was tested in a recent active surveillance study. A carcass collection service was provided free of charge to thirty farmers for calves which were fullterm (≥260 day gestation) and died within two days of calving in the spring of 2010. For each case an epidemiological submission sheet was completed by the farmer and a necropsy was performed. Results to date are presented. Two hundred and twenty five calves were examined of which thirty two (14%) had intestinal atresia. Fifteen of the farms (50%) had at least one case (1-5 cases/herd). The majority (97%) of cases were from pluriparae and all calves were singletons. Holstein-Friesian bulls sired the majority of calves (66%), of which 75% were through artificial insemination. The majority of affected calves were male (78%). Most calves either died within an hour of birth (47%) or between 24 and 24 hours later (41%). In a quarter of cases the enlarged fluid-filled abdomen caused dystocia. While 26% of dams were not examined for pregnancy, the remainder were examined between 45 and 165 days of gestation by either ultrasonography or transrectal palpation. The gestation length of affected calves was normal (mean 281.5 days; 266-291) and the season of service was normal for these spring-breeding herds. The atresias were located approximately 1.5m (0.5-3m) proximal to the caecum and 3m (1-4.5m) proximal to the anus. The hypothesis that intestinal atresia may be occurring at a higher incidence than is currently recognised was accepted; half of the farmers had at least one case and more than ten per cent of dead perinates were affected. If these incidence rates were extrapolated internationally then intestinal atresia would be a significant, but unrecognised, cause of bovine perinatal mortality. The defect was characterised by its occurrence in primarily Holstein-Friesian-artificial insemination-sired single, male calves of normal gestation length from pluriparae. This study confirmed the association with one of the known risk factors, Holstein-Friesian breed, but not with the other risk factor, amniotic vesicle palpation within 42 days of service. It is posited that neither of these risk factors adequately explains the occurrence of this congenital defect; an alternative aetiological hypothesis is required.