

High incidence of stillbirths in a free farrowing system linked to uterotonic misuse and improper farrowing management: a case report

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Key Findings:

- An overview of the factors associated with elevated stillbirth incidence, together with a structured diagnostic framework, has been presented.
- Administration of carbetocin during the farrowing process has been shown to significantly increase the incidence of weak and stillborn piglets and can lead to loss of colostrum.

Background

A good target level for stillbirths per litter varies between 5-7% of total born piglets in sows. Several major risk factors have been identified that contribute to the increased incidence of stillbirths in piglet-producing herds, including the use of uterotonic agents. Oxytocin and carbetocin are commonly administered to support and manage the farrowing process. Oxytocin is a short-acting, natural hormone that induces rapid uterine contractions, while carbetocin is a long-acting synthetic analog designed for prolonged stimulation. Both agents can affect stillbirth rates depending on timing, dosage, and the sow's physiological condition, emphasizing the need for cautious and informed use.

Case presentation

A Swiss piglet-producing herd suffered from an increased stillbirth rate of 8.7%. A herd examination was conducted to reveal the general health status of the herd. The birth process of eight sows, resulting in a total of 129 piglets, was analysed for birth management, total duration of birth, and duration of piglet expulsion. Each piglet was scored for meconium staining and vitality. In addition, material from stillborn and weak-born piglets was subjected to further examinations.

The general physical examination of the sows before farrowing revealed no abnormalities. At different time points during the farrowing process, all sows routinely received an intramuscular treatment of 35 µg carbetocin once, which caused a prolonged piglet-to-piglet interval directly after application, loss of colostrum and an increased number of weak and stillborn piglets. Histological examination of five heart samples from stillborn piglets revealed no signs of myocarditis or other abnormalities. Moreover, a qPCR for porcine circovirus type 2 on the heart samples was negative. Serology on pre-colostrum serum samples of one litter with a mummified piglet was negative for porcine parvovirus. Porcine reproductive and respiratory syndrome virus was excluded by PCR examination of the serum of ten weak-born piglets. After stopping the routine treatment with carbetocin and improving the birth management, the level of stillbirths decreased to 4.6%.

Conclusion

Herd problems with stillbirths require a comprehensive herd investigation including monitoring the birth management and ruling out potential pathogens. In this case, the administration of carbetocin during parturition led to severe undesirable side effects. A good monitoring during the farrowing process combined with appropriate measures and the omission of prophylactic carbetocin administration enhanced the birth process and thereby piglets' survival.

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