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INTRODUCTION

Caesarean section (C-section) is a very common surgery in cattle. In Belgian blue cattle breed, the first indication is the foeto-maternal disproportion. In order to prevent dystocia, early elective C-section is systematically performed in this breed (96 %) [1], [2]. The purpose of this study was to evaluate the different methods to detect elective caesarean section in Belgian white and blue breed, in order to reduce a rate of post-operative complications.

MATERIAL & METHODS

Different methods are used to detect early calving. In order to evaluate these methods and their impact on c-section complications, a survey of 34 questions answered by 73 breeders was conducted during 6 months (octobre 2015 to march 2016) in Wallonia (fig. 1).



Fig 1: Farmer responding to the survey

B- Vaginal palpation

The vaginal palpation is performed with clean disposable gloves (58,93 %) or multiple used gloves (3,85 %) (fig. 6 & 7) .



Fig 7: Vaginal palpation performed with clean disposable glove.

Fig 6: Dsinfection of glove before vaginal palpation

Others farmers perform a vaginal search with a bare hand with (23,21 %) or without (14,07 %) disinfection (fig. 8).

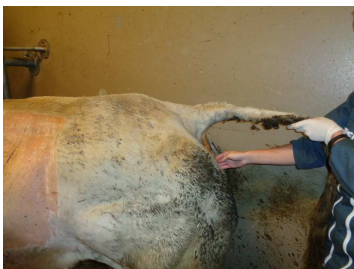


Fig 8: Vaginal palpation with bare hand

Vaginal palpation is significantly associated with more complications than the others technics

Before performing vaginal palpation, farmers (33,93 %) disinfect a genital sphere, others (41,7 %) wash it using just water and 25 % don't disinfect or wash vulva (fig. 9).



Fig 9: washing (A) and disinfection (B) of genital sphere before performing vaginal palpation



B

RESULTS & DISCUSSION

A- Calving detection methods

It appears that 26,03 % of farmers monitor ligamentous laxity, 6,85 % monitor decrease of rectal temperature (fig. 2) and 58,90 % perform both.

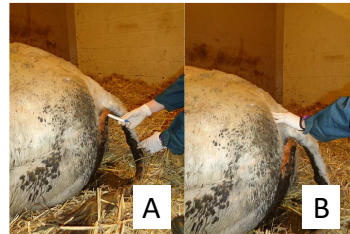


Fig 2: monitoring of rectal temperature (A) and sacrotuberous ligament laxity (B)

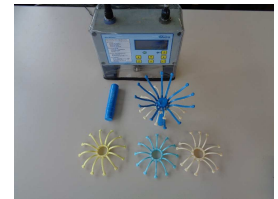


Fig 3: Vaginal probe



Fig 4: Surveillance camera

The monitoring of rectal temperature and ligamentous laxity are reliable and not expensive compared to the automated method. Seventy five percent evaluates cervix dilatation by vaginal palpation.

Vaginal probe (4,11 %) and surveillance camera (4,11 %) are not frequently used (fig. 3, 4 & 5)

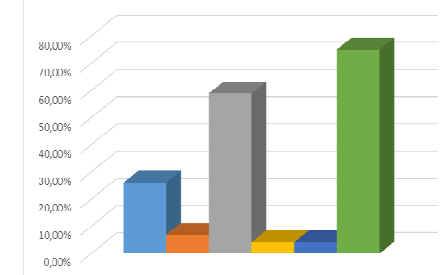


Fig 5: Rate (%) of different technics used by farmers of Belgian blue cattle to detect calving (blue = Ligamentous laxity, orange = Rectal temperature, grey = Rectal temperature and ligamentous laxity, yellow = Camera, blue = Vaginal prob, green = Vaginal palpation)

C- Postoperative complications

Vaginal palpation is significantly associated with more complications. The most frequents are retained foetal membranes (77,42 %), surgical abscesses (75 %) and peritonitis (66,67 %) (fig. 10).

Vaginal search disseminate vaginal bacteria and contaminate a fetal fluids [3].

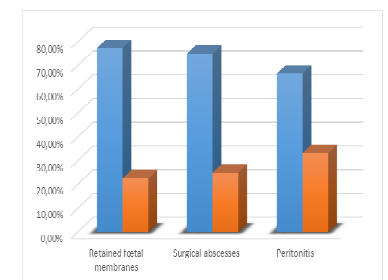


Fig 10 : Rate (%) of different complications after vaginal palpation (blue) and other technics (orange)

CONCLUSION

We demonstrate that vaginal palpation is the most frequent technic to evaluate calving and is often associated with postoperative complications due to the lack of hands hygiene. In order to reduce postoperative complications farmers, should avoid vaginal palpation as much as possible and using disinfected disposable gloves.

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