

Tritrichomonas foetus: prevalence study in naturally mating bulls in Switzerland

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Key words

Tritrichomonas foetus; natural mating bulls; *Tetratrichomonas* sp.; fertility problems; culture and PCR

Aim of the study

Natural mating, a risk factor for infection with *T. foetus*, is becoming increasingly popular in cattle reproduction. The aim of our study was thus to search for the parasite, and if found, to assess the prevalence of bovine *T. foetus* in Switzerland.

Material and methods

We included (1) bulls over two years of age used in natural mating and sent to slaughter, (2) bulls used for natural service in herds with or without fertility problems and (3) aborted fetuses. Furthermore, the routinely examined bulls used for AI (4) were included in this study. In total, 1,362 preputial samples from bulls and 60 abomasal fluid samples of aborted fetuses were analyzed for the presence of *T. foetus* by both *in vitro* cultivation and molecular analyses.

Results and significance

The parasite could not be detected in any of the samples, indicating that the maximal prevalence possibly missed was about 0.3% (95% confidence). Interestingly, in preputial samples of three bulls of category 1, apathogenic *Tetratrichomonas* sp. was identified, documenting a proof-of-principle for the methodology used in this study.

Publications, posters and presentations

Bernasconi, Ch. (2014) *Tritrichomonas foetus*: prevalence study in naturally mating bulls in Switzerland. Dissertation, Vetsuisse Fakultät, Universität Bern.

Bernasconi, Ch.; Bodmer, M.; Doherr, M.G.; Janett, F.; Thomann, A.; Spycher, C.; Iten, C.; Hentrich, B.; Gottstein, B.; Müller, N.; Frey, C.F. (2014) *Tritrichomonas foetus*: prevalence study in naturally mating bulls in Switzerland. Veterinary Parasitology, (submitted).

Hentrich, B.; Bernasconi, Ch.; Bodmer, M.; Doherr, M.G.; Janett, F.; Thomann, A.; Spycher, C.; Iten, C.; Gottstein, B.; Müller, N.; Frey, C.F. (2013) Prävalenzschätzung von *Tritrichomonas foetus* Infektionen bei Stieren in der Schweiz. Posterpräsentation. Tagung der DVG-Fachgruppe „Parasitologie und Parasitäre Krankheiten“, 08th -10th July 2013, Gießen.

Bernasconi, Ch. (2013) *Tritrichomonas foetus*: prevalence study in naturally mating bulls in Switzerland. Oral presentation. In Proceedings of the 8th ECBHM symposium (Buiatrissima), 28th -30th August 2013, Bern.

Bernasconi, Ch. (2013) *Tritrichomonas foetus*: prevalence study in naturally breeding bulls of Switzerland. Oral presentation. May 30th, Vetsuisse faculty, Bern

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