A novel approach to improve undergraduate veterinary training in bovine transrectal palpation (TRP) and pregnancy diagnosis (PD) skills



Pregnancy Diagnosis (PD) by transrectal palpation (TRP) in cattle is an important Day 1 competency for veterinary graduates which can only be mastered after a significant amount of experience. Fifth year students (n=128) who had received formal theoretical and practical training in bovine TRP and PD (live cows and simulators) during their fourth year were assessed for PD accuracy on live cows. Participation in the challenge was incentivized by a prestigious prize for the student with the best PD accuracy. Prior to the assessment, isokinetic muscle testing (using the automated Cybex machine and involving biokineticists) and a physiotherapy training programme were offered to the students.

Seventy-nine students volunteered to participate in the muscle strength testing and of these, 40 were randomly allocated to a 6 week physiotherapy exercise programme after which muscle strength was reassessed. This project therefore evaluated the effect of a physiotherapy training programme on muscle strength and PD accuracy and encouraged student-driven learning and preparation for the challenge.

Each student performed a PD on 6 cows of which the status was unknown to the students.

An experienced veterinarian later confirmed the PD which ranged from 6 weeks to 9 months or not pregnant.

Sensitivity and specificity of PD were defined as the proportion of pregnant or non-pregnant cows respectively, correctly identified as such by the student.

Preliminary results show that the physiotherapy training programme increased the sensitivity of PD and also increased grip strength of the right hand compared to students not participating in the training programme



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