EPIDEMIOLOGY AND EVIDENCE-BASED MEDICINE

INVESTIGATION OF THE WORKING PATTERNS OF CALECHE HORSES IN MARRAKECH, MOROCCO USING GPS TRACKING COLLARS

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Reasons for performing study: Few studies have collected quantitative data about the working patterns of equids providing tractive power in developing countries. This study aimed to establish if GPS collars could be used to reliably provide objective data.

Objectives: To quantify the hours worked and distances travelled by calèche horses in Marrakech using GPS tracking collars and determine differences between reported and actual working hours.

Study design: Longitudinal cohort study and questionnaire.

Methods: GPS tracking collars were custom-made by modification of sports data loggers (i-GotU GT120). These were attached to collars and placed over the horses’ necks. Structured interviews based on a questionnaire were conducted in Arabic, with calèche drivers to investigate perceived work patterns. Paired t test analysis was used to look for differences between reported and actual working hours where both data were available. Kappa testing was used to look for agreement between owner-reported work level and the actual amount of work done.

Results: Collars were applied to 21 horses and 32 interviews were conducted. On average calèche horses worked 9 h 38 min and travelled 31.9 km per day. The average trip length was 1 h 17 min (range 30 min to 1 h 54 min) and average trips per day of 3 (range 1–7). Mean time worked per week was 43.7 h. No significant differences were found between owner-reported and actual amount of work done. When work level was compared between horses, there was very poor agreement between reported and actual working level.

Conclusions: The recommendations from this study could be used to inform decisions about whether further interventions are needed to ensure good calèche horse welfare. The findings indicate owners have a good understanding of their own horses’ work level but may be unaware of standard practises of other calèches. This study proved modified GPS trackers are an effective method of collecting data about working equids.

Ethical animal research: The study was reviewed and approved by the Ethics Committee, School of Veterinary Medicine and Science, University of Nottingham. Informed consent was obtained from all participants. Source of funding: None. Competing interests: None declared.

ANALYSIS OF SUDDEN DEATH AND FATAL MUSCULOSKELETAL INJURY DURING FEI THREE-DAY EVENTING

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Reasons for performing study: Data on equine deaths in 3-day eventing (3DE) is lacking.

Objectives: To report the prevalence of sudden death and fatal musculoskeletal injury in 3DE and describe causes of sudden death.

Study design: Cross-sectional survey.

Methods: Numbers of starts, fatalities (death/euthanasia) and fatal musculoskeletal injuries during 2008–2014 were obtained from the International Federation for Equestrian Sports (FEI). Post-mortem reports were reviewed and sudden deaths were classified using categories defined for Thoroughbred racing [1].

Results: There were 112,958 starts and 66 fatalities thus a prevalence of 5.8 deaths/10,000 starts: 41 (62%) musculoskeletal injury, prevalence 3.6/10,000 starts; 16 (24%) sudden death, prevalence 1.4/10,000 starts; 9 (14%) further details not provided. There was considerable variation in available information on post-mortem examination. A definitive cause of death was identified in 6 of the 16 sudden death cases: 3 central nervous system trauma and 3 blood vessel rupture. Presumptive diagnoses were proposed in 5/16 cases, all cardiopulmonary failure. Cause of sudden death was unidentified in 5/16. This distribution of musculoskeletal vs. sudden death is similar to fatalities in racing. The distribution among categories was also similar to Thoroughbred racing fatalities but definitive diagnoses were reached less frequently.

Conclusions: Causes of death associated with 3DE are similar to those reported in Thoroughbred racehorses while prevalence of fatality, fatal musculoskeletal injury and sudden death are lower. A more standardised system of reporting fatalities would be valuable.

Ethical animal research: Study approval and data provided by FEI Veterinary Committee. Source of funding: None. Competing interests: None declared.


SIRE-LEVEL ANALYSIS OF RACE-DAY VETERINARY EVENTS AND PERFORMANCE IN FLAT RACING PROGENY IN GREAT BRITAIN (2000–2013): A PILOT STUDY

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Reasons for performing study: Race-day veterinary events experienced by flat racing Thoroughbreds are an ongoing concern for