

CALIFORNIA HORSE RACING BOARD

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Postmortem Examination Review: Medina Spirit (trainer Bob Baffert)

Saturday, February 12, 2022 via Teams Meeting

Panel Members were Steward Kim Sawyer, Safety Steward David Nuesch, Chief Official Veterinarian Dr. Tim Grande, and Official Veterinarian Dr. Alina Vale. Also present in the meeting was trainer Bob Baffert.

Friday, February 18, 2022

Panel Member Official Veterinarian Dr. Alina Vale communicated with Attending Veterinarian Dr. Vincent Baker.

Saturday, February 12, 2022

Panel Member Official Veterinarian Dr. Alina Vale communicated with Equine Surgeon Dr. Ryan Carpenter.

Friday, February 11, 2022

Panel Member Official Veterinarian Dr. Alina Vale communicated with Attending Veterinarian Dr. Sam Bradley.

Horse Information: Medina Spirit, 3-year-old Thoroughbred cryptorchid colt, microchip # [REDACTED]

Incident Summary:

On December 6, 2021 Medina Spirit performed a five furlong workout in company on the main dirt track during morning training at Santa Anita Park. Near the end of the work the horse's tail raised and the horse became wobbly. The horse was quickly pulled up by the exercise rider then collapsed near the 7/8ths pole and died immediately, at 7:55 A.M. The horse was insured.

Necropsy Summary:

A necropsy examination and extensive laboratory testing did not determine the definitive cause of death, however, sudden cardiorespiratory arrest was suspected. A possible cause of cardiac failure is a defect in the cardiac conduction system. Gross changes included pulmonary congestion and edema with milder hemorrhage, and congestion and small hemorrhages in multiple organs. Microscopic changes in the heart muscle and intra-pulmonary veins were considered incidental.

Additional findings included degenerative joint disease in both elbows and all fetlock joints, and apical enthesophytes (bony proliferations) of the proximal sesamoid bones with the left forelimb most affected.

Toxicology:

Furosemide (commonly called 'Lasix', a diuretic) and omeprazole sulfide (an anti-ulcer medication) were detected on screening tests of postmortem blood and urine samples. Both are legal therapeutic medications.

Racing/Training History:

Medina Spirit ran 10 races, winning 5, with the first race on 12/11/20. The horse tested positive for betamethasone after finishing first in the Kentucky Derby on 5/1/21. The horse's final race was 11/6/21 (placing 2nd in the Breeders' Cup Classic) then the horse worked 3 furlongs on 11/26/21 uneventfully. The horse then walked 1 day, jogged 1 day, and galloped for 7 days prior to the final workout. The trainer planned to work the horse 12/5/21, however, the track was closed to high-speed workouts that morning due to heavy fog. The horse was being prepared for a race 12/26/21 and then pointed towards the Saudi Cup.

The trainer described the horse as tall with a slight (light) build. The trainer explained the horse was remarkable in that he wouldn't blow (breathe heavily) nor appear tired after high-speed exercise. The horse routinely wore a tongue tie during high-speed exercise to prevent dorsal displacement of the soft palate, and furosemide was used for timed workouts to prevent exercise-induced pulmonary hemorrhage. The horse routinely received GastroGard (omeprazole), vitamins, electrolytes, and Finish First supplements.

Veterinary History Summary:

On 11/26/21 Medina Spirit received furosemide prior to the timed work, then after exercise the horse received a vitamin injection (Vitamin B 12, Vitamin B complex and Vitamin C). Endoscopy of the upper airway revealed a small ulcer along the free border of the soft palate, diagnosed post-race on 11/6/21, had resolved with the recommended throat spray (ingredients include gentamicin, dexamethasone and DMSO). GastroGard (omeprazole) was dispensed on 11/29/21 and 12/4/21. On 12/5/21 furosemide was administered by attending veterinarian Dr. Sam Bradley, however, safety concerns (heavy fog) prevented the horse from working that morning. On 12/6/21 attending veterinarian Dr. Vincent Baker administered 150 mg furosemide at 5:15 A.M.

Previously, entrapped epiglottis release surgery was performed under intravenous general anesthesia on 3/10/21. Throat spray was dispensed through 4/24/21. The horse was placed on the CHRB Veterinarian's List 4/5/21 for tarsal (hock) joint injections with hyaluronic acid and Vetalog (triamcinolone). A skin infection (dermatitis) along the horse's neck, girth area and hindquarters prompted the following products to be dispensed: topical Otomax (an ointment for bacterial or fungal infections with ingredients gentamicin, betamethasone valerate and clotrimazole) on 4/9/21 and 4/19/21; oral griseofulvin (antifungal used to treat ringworm infections) on 4/12/21; and topical Equishield CK (antibacterial and antifungal) shampoo on 4/19/21. On 6/21/21 a mild hind end weakness was detected and a blood titer for Equine Protozoal Myeloencephalitis (EPM) was submitted. On 6/25/21 a fully body nuclear scintigraphy exam was performed as a precaution. Based on the EPM test results and clinical observation, Marquis (ponazuril, a treatment for EPM) was dispensed on 7/2/21.

Pre-race examinations:

No cardiorespiratory concerns were identified on pre-race examinations.

Conclusion:

Medina Spirit collapsed and died following a high-speed workout.

Equine sudden death cases while racing and training are an internationally recognized phenomenon and are very frustrating as the definitive cause of death is found in only approximately half of all cases despite considerable pathological and toxicological effort¹. In a study of sudden deaths in young competitive human athletes, approximately a third of cardiovascular deaths (359/1049) did not have a precise diagnosis². The speculation is that equine sudden deaths without clear pathological signs are cardiac conduction events. There is currently no screening test to determine which horses are at risk for developing exercise-induced arrhythmias, although research continues in this effort.

References:

1. Lyle CH, Uzal FA, McGorum BC, Aida H, Blissitt KJ, Case JT, Charles JT, Gardner I, Horadagoda N, Kusano K, Lam K, Pack JD, Parkin TD, Slocombe RF, Steward BD, Boden LA. Sudden death in racing Thoroughbred horses: an international multicentre study of post mortem findings. *Equine Vet J*. 2011 May;43(3):324-31. doi: 10.1111/j.2042-3306.2010.00164.x. Epub 2010 Sep 14. PMID: 21492210.
2. Maron BJ, Doerer JJ, Haas TS, Tierney DM, Mueller FO. Sudden deaths in young competitive athletes: analysis of 1866 deaths in the United States, 1980-2006. *Circulation*. 2009 Mar 3;119(8):1085-92. doi: 10.1161/CIRCULATIONAHA.108.804617. Epub 2009 Feb 16. PMID: 19221222.

Respectfully Submitted,
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February 24, 2022