**In Consideration of a Ban on Lasix: the race day medication**

 **drug causing a stir in North American Horse Racing**

April 23rd, 2019

Final CSET Paper

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Last Thursday, owners of several North American racetracks announced a plan to ban the race day medication drug, Lasix. The announcement came from the big three of horse racing management; the Stronach Group, the New York Racing Association and Churchill Downs Inc. who collectively operate eleven racetracks including all three hosting racetracks of the Triple Crown.

Formally known as furosemide, Lasix is a diuretic administered to horses who suffer from Exercise Induced Pulmonary Hemorrhaging, or bleeding of the lungs. Currently, 95% of racehorses in North America race on Lasix, however, recent breakdowns at Santa Anita Park in Arcadia California have prompted questions about the safety and morality of race day medication.

The announcement on Thursday called for a gradual withdrawal from Lasix. More specifically, starting in 2020, no two-year old’s, or horses in their first year of running, will be allowed to be administered Lasix. The following year, the ban will also apply to all older horses.

Proponents of Lasix argue that by controlling EIPH, the drug benefits the horse’s overall welfare as well as allows it to run to their true ability. Opponents, however, claim that the drug negatively affects public perception of Horse Racing and that its application is largely unnecessary. Unfortunately for both sides, the debate is far more complex than a simple two-sided argument. To truly understand the controversy, one must consider the political, moral and socio economical aspects associated with treating a horse with Lasix.

Horse Racing in America is under fire from animal rights groups, such as People for the Ethical Treatment of Animals (PETA), for the ethnicization of over 23 horses due to breakdowns. The cause of these breakdowns has yet to be determined but experts have speculated that unusual climate conditions have contributed. Nonetheless, groups such as PETA are using these casualties to question the morality of horseracing.

Longtime owner and breeder of racehorses Arthur Hancock, who runs a successful breeding operating from Lexington Kentucky, said “the public doesn’t know the difference between furosemide and cocaine. There’s a perception out there that all these horses are running on drugs. I say we ought to just get rid of it (Lasix).” Mr. Hancock’s conjecture that Lasix is contributing to a perception of using steroids in horse racing has merit. Each year leading trainers are set down for administering their horses banned substances. And while many of these rulings are overruled, or the result of an unintentional milligram too much of a prescribed medical drug, the public only sees the excessive counts of drug infractions. Mr. Hancock believes that dissolving Lasix will lead to better public perception, an even playing field for everyone, and an end to an “unnecessary evil that has crept into the sport”. His views align with many prominent breeders and represent a solution to the relatively unknowledgeable horse racing fan base.

However, the problem with fixing the chaos at Santa Anita with a ban on Lasix is that they are entirely unrelated. The Santa Anita breakdowns represent an isolated case and should be treated as such. Proper analysis should be done to determine the catalyst for these racing fatalities before any reactionary policy is implemented. In other words, scientific research should drive decisions of animal welfare, not impulsive reaction to combatant political groups.

 In support of this view is the American Association of Equine Practitioners. The group is represented by nearly 9,300 well respected veterinarians and veterinary students who aim to improve the health and welfare of the horse. Their research with respect to Lasix is some of the most advanced in the field and represents the basis for many race track medication policies. In a public report to the Jockey Club of America, which is comprised of leaders of the racing industry, the AAEP outlined the nature of EIPH and the challenges associated with its treatment.

EIPH commonly occurs in racehorses, but can also occur in other equestrian disciplines where strenuous activity takes place. EIPH can even be found in human athletes. Racehorses who experience EIPH are commonly known as bleeders because in certain situations there will be enough pulmonary hemorrhaging to cause bleeding from the horse’s nose. However, these cases are relatively rare and represent a small percentage of horses with EIPH. The more modern method of detection for EIPH involves administering an endoscopic examination, which will reveal that up to 60% of racehorses have blood in their trachea. Of that 60%, 20% experience moderate to sever levels of EIPH (grades 2-4 on a 0-5 scale). Research shows that horses with a grade score of 2 or higher experience significantly decreased performance.

Facts such as those above suggest the prevalence of EIPH. For trainer Michael Matz, they also support the need for a solution. “In Europe, many people don’t scope after a race. I like to scope after every workout and race to see what’s going on. It gives me an idea of what went wrong if the horse ran poorly.” Matz’s insinuation that European trainers may not be fully aware of the prevalence at which EIPH is affecting their horses is a direct response to opponents of Lasix who view the European system as a model for what North American racing should look like. However, the issue is not so simple as distinguished European veterinarian Des Leadon explained. In his interview with the Thoroughbred Daily News, Leadon was supportive of gradual phasing out of Lasix, but also pointed out that “there are parts of the U.S. where they have very good reasons for taking a medicated approach to racing.” He cautioned against rapid judgement of North American medication policies, citing that the industry still has a ways to go in understanding EIPH. Moreover, Leadon admitted that while Europeans don’t race on the drug, many horses are trained on it.

Young European trainer Ed Dunlop validated Leadon’s claim. Dunlop viewed Thursday’s announcement as a positive step for North American racing, but admitted it will require a significant adjustment for transatlantic trainers. “My understanding is that many American trainers administer Lasix to keep the horse more confident,” said Dunlop. Matz corroborated this idea and explained that some horses will be hesitant to reach their potential because they “don’t want to bleed.” “Horses will bleed” said Dunlop, “it is inevitable. If it is a horse with ability, we will try to manage it (bleeding), if not, we will try move on and try to retire the horse.” Dunlop’s remark draws light on the thousands of lower level racehorses that could be displaced without Lasix. This is especially the case because many of the second careers which racehorses enjoy, such as becoming field hunters and pleasure horses, are not as popular in the US as they are in Europe. When asked about what he believes might be the reasons for more prevalent bleeding, Dunlop was hesitant to say but spoke to the importance of bloodlines. He explained that many years ago, before Lasix was available, many top breeders may not have bred to a known bleeder. Nowadays, American stallions are bred to mares internationally, and the gene pools of horse that ran with and without Lasix are highly intermixed.

Irish based trainer John Oxx also communicated the difficulties associated with Lasix. When asked about why American trainers might feel the need to administer Lasix form a horse welfare standpoint. “I can see why they'd say that--and it's not without some validity. I've had horses here that might bleed occasionally, but it was manageable. But then when we've sent them to the States, even with Lasix, they couldn't stop them bleeding. I think a lot of it is to do with a different climatic situation: hot and humid temperatures, maybe, or the air quality in big cities. In those settings, it might be very difficult to control bleeding by homeopathic means.” The problem, contended Oxx, is that “while there are different views, some people say there's more to Lasix than just [prevention of] bleeding. If it could be proven that there's absolutely no performance-enhancing effect, well, there'd be more of an argument. But people over here would be a bit more suspicious."

“The style of racing in Europe is very different from that in North America,” said Matz. First, Europeans typically race on grass and all-natural footing which are thought to be less abrasive that dirt. Furthermore, many European horses are turned out and trained in rural yards then shipped in to race on the day of competition. This differs from the majority of American horses who train and base at their respective racetracks which are usually located in highly populated areas. Matz believes these factors contribute to the likelihood of EIPH in horses.

During strenuous exercise, pressure in the pulmonary veins reaches a point beyond what the thin walled capillaries in the lung can tolerate. This effect, coupled with negative airway pressure from each nostril, creates a pressure discrepancy between the vasculature and airways. As a result, capillary stress failure causes bleeding to occur in the horse’s airway, predominately in the dorsal caudal lung lobes. Although the intricacies of how Lasix reduces bleeding are not entirely known, the principal idea is that it lowers the horses blood pressure in their lungs.

The side effects of this bleeding include lung scarring. Furthermore, lung scaring can pressures on the pulmonary veins to increase, causing the horse to be more susceptible to future bleeding incidents. There is also the threat of infection.

In an interview with veterinarian Kathleen Anderson, who is the owner of Equine Veterinary Care PC in Fair Hill Maryland and previous President of the AAEP, she acknowledged her primary mission to protect the health and welfare of horses. “We know that 99% of these horses do to some degree experience bleeding into the lung tissue and that matter is not contributing the health and welfare of horses. It’s a negative influence. So, if I can mitigate that with Lasix, then I have to go with the Lasix as being the useful product.” Moreover, “from a sports medicine practitioners’ standpoint, which means my goal is for horses to be able to maximize their natural ability, and that doesn’t mean enhance it, it means maximize, horses need to have as much airflow as they can. We know that from a racing perspective, there are two issues; one can they breath and two are they sound. And so, the breathing is equally as important as the legs, and so when I’m looking at maximizing the athletic performance of the horse I need them to be able to breath to the best of their ability.”

Matz shares Dr. Anderson’s viewpoint that Lasix unequivocally represents the best alternative to bleeding. He also shares her opinion that it is not a performance enhancing drug. Yet, the definition of performance enhancement in regard to Lasix is very gray line. Merriam Webster and the USDA define performance enhancing drugs as those which give the competitor an advantage by artificially altering the body. Under this definition, the administering of Lasix to horses that suffer from EIPH would certainly fit. Moreover, research suggest that horses experience weight loss after being given Lasix. And in a sport where even the jockey’s saddle is weighed and a mere second can command the difference between first and fifth, this would surely constitute an athletic advantage. Mr. Hancock spoke adamantly from this point of view, even referencing a horse he had owned named Ascent who after not winning a race was given Lasix and soon after won one of the largest races in America. In contrast, Dr. Anderson cited the fact that a horse who did not bleed would not perform better if given Lasix. Thus, the drug only puts horses suffering from EIPH at a level playing field with those few that don’t suffer from the condition.

Another important, but less discussed, variable to consider in a potential ban on Lasix is that alternative methods to Lasix are often inhumane. They include taking the water buckets out of the horse’s stalls hours before they race, leading to dehydration, and herbal medication that is often unregulated. Thus, the question again is raised of what is in the best interest of the horses welfare.

From an economic perspective, the Lasix debate is also divided. According the the American Jockey Club, Lasix costs owners a 100 million dollars a year. However, this number represents a relatively small cost when compared to other medical treatments. Alternative treatment for bleeders include month long turnout, hyperbaric treatments and saltwater spa treatments. These treatments can cost thousands of dollars and reduce a race horses already short career. “Many anti-Lasix supporters can afford these types of alternative solutions, but what about all the horse’s running for 3,000 dollars who bleed. They aren’t going to have the luxury of these alternative” says Matz. In a world where the Sport of Kings remains public perception, it is important to consider the thousands of horses who would not get the luxury of proper treatment with a Lasix ban.

So, is there a way to repair the public perception of horse racing while protecting the horses we love? Many contend that there is. With stronger regulations for anti-inflammatories and steroids, the number of medication violations will decrease. Furthermore, tracks must manage racetrack conditions more accurately and prioritize the safety of their horses and jockeys over marginal financial gain. Doing so will curb the number of breakdowns and eventually help repair the public image of horse racing. Educating the public on the difference between Lasix and steroids will not be easy but accepting a ban on Lasix is akin to taking the easy way out.

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*Nat White, Virginia Tech, Panel Chair*

*Warwick Bayly, Washington State University*

*Jeff Blea, Racetrack practitioner, Sierra Madre, CA, AAEP past president*

*Dale Brown, University of Colorado*

*Kent Carter, Texas A&M University, AAEP immediate past president*

*Gordon Cohen, University of California, San Francisco*

*Paul Morley, Colorado State University*

*David Poole, Kansas State University*

*Ed Robinson, Michigan State University*

*Corrine Sweeney, University of Pennsylvania*

*Dan Weiss, University of Vermont*

*Kurt Willams, Michigan State University*

Slideshow: <https://courses.grayson-jockeyclub.org/courses/WSS/WSS_VII/WSS_VII_2016/story.html>