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RE: 2014 Medication Guidelines

Introduction

The treatment of race horses with therapeutic medications is encouraged by the PA Harness Racing Commission when it is performed within the context of a veterinary-client-patient relationship. A veterinary-client-patient relationship includes evaluation of the client's horse, diagnosis of disease, and the development and recommendation of a treatment plan by a licensed veterinarian. When administered within this context, therapeutic medications are recognized as beneficial to the health and well-being of the race horse.

Legally, the Commonwealth of PA is a "no tolerance" state, which means that the presence of any foreign substance identifiable in plasma or urine by the analytical instrumentation at the drug testing laboratory can be considered a violation of the rules of racing by the PA Harness Racing Commission. Certain therapeutic medications, however, have been assigned threshold values with the understanding that concentrations falling below the threshold are thought by available scientific studies to not have a significant effect on the horse on race day. As the sensitivity of the analytical instruments has increased, more thresholds have been adopted, and the PA Harness Racing Commission reserves the right to review each laboratory finding to assess the appropriate action needed.

The guidelines presented below represent the current thinking of the PA Harness Racing Commission regarding the various medications addressed, and are meant to help veterinarians recommend an appropriate withdrawal time, and to help trainers understand what is an appropriate withdrawal time for the medications prescribed, so that therapeutic use of these substances does not result in a positive drug test. As more scientific information becomes available, these guidelines will be changed when necessary. **Unfortunately, information is not available for all medications and/or administration protocols prescribed by veterinarians, and even when the same protocol is used, biological variability (i.e. genetic differences and/or the presence of liver or kidney disease) may result in the presence of a therapeutic medication in the post-race samples from a particular horse.** In most cases, the protocols studied also did not assess multi-day dosing (i.e. possible accumulation of the drug when administered over several days) or drug-drug interactions (i.e. some drugs administered at the same time will slow down the elimination of one or both drugs from the horse). Thus, veterinarians and trainers are encouraged to use caution, and to consult with the Penn Vet Equine Pharmacology Laboratory regarding protocols that deviate from those studied and presented below.

Below are the New Guidelines for 2014, and a brief review of Historical Guidelines that are still applicable.

New for 2014**Revised Procaine Penicillin G Policy**

A new policy was adopted by the PA Harness Racing Commission, and will go into effect on April 1, 2014, regarding the use and reporting of procaine penicillin G. This policy was designed to prevent the therapeutic use of procaine penicillin G from resulting in a positive blood test for procaine. Briefly:

1. Procaine penicillin cannot be administered after the time of entry.
2. Recent treatment with procaine penicillin G must be reported at the time of entry to the Commission and a completed form must be submitted to the Commission Office where the horse is racing on the day of entry.
3. Owners/Trainers wanting their horse to race following procaine penicillin G treatment will agree to have their horses held in a six (6) hour detention period prior to their scheduled race.
4. Horses treated with procaine penicillin G within four (4) weeks prior to racing are strongly encouraged to report procaine penicillin G administrations.
5. Following the conclusion of the race where it has been reported that procaine penicillin G has been administered to a horse, the horse will be tested.
6. Failing to comply with these instructions and the presence of procaine in a post-race sample will result in a positive test.

Please direct any questions regarding this policy to the PA Harness Racing Commission Executive Secretary. Please direct any questions regarding the science behind this policy to the Penn Vet Equine Pharmacology Laboratory.

Revised AMICAR (aminocaproic acid) Policy

After careful consideration of the available scientific studies, the PA Harness Racing Commission has discontinued allowing the use of AMICAR on race-day. This policy goes into effect on March 1, 2014. Please direct any questions regarding the policy to the PA Harness Racing Commission. Please direct any questions regarding the science to the Penn Vet Equine Pharmacology Laboratory.

RMTC Withdrawal Recommendations

In July 2013, the Racing Medication and Testing Consortium released recommended thresholds and withdrawal times for 24 commonly used therapeutic medications (available on their website at www.rmtcnet.com). The PA Harness Racing Commission has NOT adopted these thresholds. Many of these thresholds, however, are consistent with current drug testing practices in PA, and the corresponding recommended withdrawal time may be appropriate. Questions regarding the appropriateness of these withdrawal times in PA should be directed to the Penn Vet Equine Pharmacology Laboratory.

Historical Guidelines (in Alphabetical Order by Drug Class)

Anabolic and Androgenic Steroids

On October 1st, 2008, the PA Harness Racing Commission prohibited the use of anabolic and androgenic steroids in horses racing within the Commonwealth of PA due to the performance-enhancing ability of these types of drugs. Androgenic steroids produced naturally by the horse must be below the established threshold levels, which represent normal production of these substances (e.g. the testosterone plasma concentration cannot be greater than 100 pg/mL in the female or gelded male horse, and cannot be greater than 2000 pg/mL in the intact male horse).

Anabolic and androgenic steroids are VERY SLOWLY eliminated from the horse, sometimes requiring up to 60 days. Please contact the PA Harness Racing Commission if your horse may have been exposed to an anabolic or androgenic steroid, or if you are unsure of the sex of your animal (e.g. hermaphrodites, cryptorchid geldings). Out of competition testing is available at a cost payable by the owner/trainer to assess whether your horse has acceptable levels of anabolic and androgenic steroids. Please contact the Penn Vet Equine Pharmacology Laboratory with questions regarding these tests.

Corticosteroids

As of June 1st, 2009, the PA Harness Racing Commission began regulating the use of corticosteroids, which are commonly used intra-articularly to treat osteoarthritis and orally to treat inflammatory airway disease. The concentration of corticosteroids in post-race blood samples must be below the ability of the drug testing laboratory to accurately quantify the substance, and that concentration depends on which corticosteroid is used. Some of these products are eliminated more quickly than others, and some routes of administration are eliminated more quickly than others. For example, methylprednisolone acetate (Depo-medrol) takes a very long time to be eliminated by the horse following a typical IA administration (e.g. 100 mg/single joint takes 21 days). Triamcinolone acetonide (Vetalog) takes a very long time to be eliminated following intramuscular administration of a typical dose (e.g. 0.04 mg/kg takes > 14 days). The methods used to detect and quantify these substances have not changed since the inception of this policy in 2009.

Recently, the Racing Medication and Testing Consortium adopted this policy, and they have posted all of the established thresholds and recommended withdrawal times on their website (www.rmtcnet.com), under the heading “Withdrawal Times”. These include betamethasone (Betasone Aqueous Suspension), dexamethasone (Azium, Voren), methylprednisolone acetate (Depo-medrol), prednisolone (Prednis Tab – extralabel use) and triamcinolone acetonide (Vetalog).

Please contact the PA Harness Racing Commission with any questions regarding this policy, and the Penn Vet Equine Pharmacology Laboratory with any questions regarding the thresholds and/or recommended withdrawal times.

Non-steroidal Anti-inflammatory Drugs (NSAIDs)

The PA Harness Racing Commission uses established plasma thresholds for the two most commonly used NSAIDs, flunixin meglumine (e.g. Banamine, Flu-Nix) and phenylbutazone (e.g. Equibute, Tevocodyne, Butazolidin®, Phen-Buta Vet Injection). Historically, the withdrawal time recommended has been 24 h following a single intravenous administration of these products at their FDA-approved doses. However, a longer withdrawal time is frequently needed. For example, the weight of the horse is usually not considered, and smaller horses will require a longer withdrawal time. It is also imperative to note that accumulation is expected following dosing for multiple days, especially for phenylbutazone. While this has led some to switch from one NSAID to another the day before the race, this practice GREATLY increases the risk of a Stacking violation. The No Stacking Rule was adopted by the PA Harness Racing Commission in 2012 and states that only one NSAID can be detected at any concentration (i.e. even below the threshold values) in the post-race plasma sample. Thus, switching from one NSAID to another shortly before the race is not recommended – instead the use of a longer withdrawal time (e.g. 36 h for phenylbutazone) is recommended if the NSAID has been administered for multiple days prior to the race. Also note that the time it takes for elimination of the drug after its administration by other routes (oral, intramuscular) is much more variable, and thus administration by these routes is not recommended the day before the race.

Other NSAIDs approved by the Center for Veterinary Medicine within the FDA for use in the horse include ketoprofen (Ketofen®), diclofenac (Surpass), firocoxib (Equioxx), and naproxen (Equiproxen). The Racing Medication and Testing Consortium recently recommended thresholds and withdrawal times for ketoprofen, diclofenac, and firocoxib, and these are consistent with PA drug testing procedures (see www.rmtcnet.com). Not enough data are available to estimate a withdrawal time for naproxen, and a defined threshold has not been established.

Please contact the PA Harness Racing Commission with any questions regarding this policy, and the Penn Vet Equine Pharmacology Laboratory with any questions regarding the thresholds and/or recommended withdrawal times.

Muscle Relaxants

A muscle relaxant is frequently prescribed to racehorses for “tying up” (exertional rhabdomyolysis). Many different types of muscle relaxants exist, however methocarbamol (Robaxin®) is the only one approved for use in horses by the Center for Veterinary Medicine within the FDA. The threshold for methocarbamol is 1 ng/mL, and the estimated withdrawal time needed is 48 h for a 2.2 mg/kg dose administered by the intravenous route. Data are not available for the oral administration of methocarbamol. A longer withdrawal time may be needed in smaller animals that are not dosed by weight, or due to the use of a compounded product (Robaxin® was unavailable for some time, but is available again). In addition, a recent study has been completed within the Penn Vet Equine Pharmacology Laboratory that indicates there is a drug-drug interaction with phenylbutazone. The co-administration of phenylbutazone slowed down the elimination of methocarbamol, and a safer withdrawal time for methocarbamol is 72 h when methocarbamol is co-administered with phenylbutazone. There was no effect of methocarbamol on the withdrawal time needed for phenylbutazone (manuscript in preparation).

A threshold value and proposed withdrawal time are also available for the extra-label use of dantrolene on the Racing Medication and Testing Consortium website, and this information is consistent with current drug testing practices in PA.

Please contact the PA Harness Racing Commission with any questions regarding this policy, and the Penn Vet Equine Pharmacology Laboratory with any questions regarding the thresholds and/or recommended withdrawal times.