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The Equine Report

ARTHRITIS AND JOINT THERAPIES

Most horse owners at one time or another experience the effects of arthritis on their horses. This is commonly known as degenerative joint disease (DJD) or osteoarthritis. It often leads to intermittent lameness, decreased performance and unrelenting pain that can affect not only the horse's job but also its quality of life.

The progression of arthritis is the same no matter the inciting cause. Any disruption of the normal architecture of the joint leads to inflammation in the joint. The lubricating function of the joint fluid gets disrupted leading to cartilage degeneration and eventual bone remodeling. The specific inciting cause, the individual's job, age and genetic predisposition determine the progression of this process.

Research suggests that over 60% of all lameness in horses is related to osteoarthritis. From the young performance horse to the retired pleasure horse, any horse can suffer from this debilitating and often career ending disease. The term arthritis is often associated with old age and with our horses living longer more productive lives well into their late twenties and early thirties, it is not unreasonable to think that most horses will at some point suffer from this disease. If we add the possibility of horses developing arthritis secondary to traumatic joint injuries, developmental orthopedic disease or chronic wear and tear from performance it is not unreasonable to consider that over 4 million horses nationwide suffer from this disease. Lacerations or puncture wounds to the joint will cause inflammation and damage to the joint and a breakdown of the normal anatomy of the joint. Young horses with developmental problems that grow to have severe conformational defects or "crooked legs" will have abnormal load bearing on the joint leading to early wear and cartilage damage. Performance horses that start a career early at the racetrack or rodeo arena, in particular cutting, roping and barrel racing, will place an extreme amount of stress on their joints and frequently develop arthritis early in their careers. All these situations will lead to different degrees of damage and progression of this debilitating condition making it sometimes challenging to devise a therapeutic plan for the individual horse.

Given the nature of the disease, osteoarthritis is not curable but manageable. Our efforts are concentrated towards slowing down the progression of the disease and improving the

horse's quality of life and performance level. Preventative efforts and oral supplements can help improve the quality of the joint fluid and the articular cartilage that covers the bone providing a smooth surface for joint movement. Most efforts are concentrated towards improving lubrication of the joint and preventing damaging inflammation to slow down the progression of the arthritis. Once the disease sets in, pain control and management of the condition can extend the useful life of the horse.

Some of the most recognized over the counter joint supplements include: glucosamine, chondroitin sulfate and avocado-soybean unsaponifiables (ASU). These products are widely used as preventative joint therapies since they are part of the building blocks for articular cartilage and joint fluid. Questionable results from human and canine research suggest decreased inflammation and joint pain with similar anecdotes coming from horse owner and trainers. Further studies are under way to determine the exact response of these in horse joint cartilage. There is a wide variety of products with questionable research and quality control that are available over the counter, making their efficacy unknown.



MSM is a sulfur-based compound that may help prevent joint stress by improving the quality of cartilage and connective tissue associated with the joint. Its benefits and effectiveness in the equine cartilage have not been conclusively proven, but it appears to serve a synergistic effect with other supplements.

Hyaluronic acid (HA) is a normal component of joint fluid and cartilage. Commonly found as sodium hyaluronate it helps give joint fluid its viscosity and lubricating qualities. Used as a systemic IV injection (ie Legend®) to treat every joint or injected directly into one joint (ie HylartinV®). These products have been extensively researched proving their benefits for arthritis treatment. Anecdotal results support

the benefits of oral hyaluronic acid products (ie Lubrysin®) although minimal research exists to back their claims. Questions about molecule size and absorption still remain unanswered.

To control inflammation and pain systemically, nonsteroidal anti-inflammatories (NSAIDs) will always be the first step in treatment; the most commonly used are phenylbutazone ("Bute"), flunixin (Banamine®) and firocoxib (Equioxx®). The later tends to be more selective toward pain and has fewer negative side effects. Caution should still be used when any NSAIDs are administered daily since they can cause stomach ulcers and liver or kidney damage with chronic use.

Polysulfated glycosaminoglycan (PSGAG), i.e. Adequan®, is a medication derived from chondroitin and can decrease the release of enzymes and inflammatory mediators in arthritic joints. It also promotes cartilage healing and helps increase the health of the joint. It can be administered directly into the joint or in the muscle as both a treatment and as prevention of arthritis.

On advanced cases a more direct approach to control joint inflammation is achieved by injecting steroids directly into the affected joint. Corticosteroids like triamcinolone (Vetalog®) and methylprednisolone acetate (Depo-Medrol®), decrease inflammation and pain associated with arthritis allowing the joint to recuperate and create better quality joint fluid. Care must be taken when using these products to prevent further damage to the cartilage or side effects of the steroids like laminitis.

The latest research has aided in the development of newer treatment options like platelet rich plasma (PRP) and iRAP® which use the horse's own blood to attack the enzymes in the joint which start the cascade of damaging reactions that lead to arthritis. A series of joint injections using these products are showing promising results at slowing down or potentially reversing the signs of arthritis.

More research is ongoing to combat this debilitating disease. All cases are different, therefore proper diagnosis and the right treatment plan for the individual horse should be developed with your veterinarian. This will help fight arthritis and improve your horse's performance and quality of life.

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CONTINUING EDUCATION

Dr. David Asmar and Viviana Burgos attended the American Association of Equine Practitioners Annual Convention in Baltimore, MD. Up to date research on lameness, joint therapies and reproduction among many other topics were covered in this four day meeting. Viviana attended business education and management seminars while Dr. Asmar joined more than 6,000 equine veterinarians from around the world on the most current advances in veterinary medicine and surgery.

Clinic Hours:

Monday-Friday 8:00 AM—6:00 PM

Saturday 8:00 AM—5:00 PM

24-hour emergency service 7 days a week.

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Celebrating February as
National Pet Dental Health Month
*All routine dental procedures performed during
January and February will be priced at \$175.00*

This special price includes: complete oral exam, anesthesia, incisor reduction, point and hook removal and molar equilibration. State-of-the-art power tools and technology are applied with the horse in its natural head and neck position.

**Extractions and trip fees are not included.*



Equine Lameness Seminar

Saturday, January 29, 2011

6:30 PM at the Equine Hospital

Presented by Dr. David Asmar

Third in a Series on Lameness

“From the Ground Up”

Carpus (*knee*) and Tarsus (*hock*)

Please RSVP to (503) 630-4558

Coffee and dessert will be served.

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