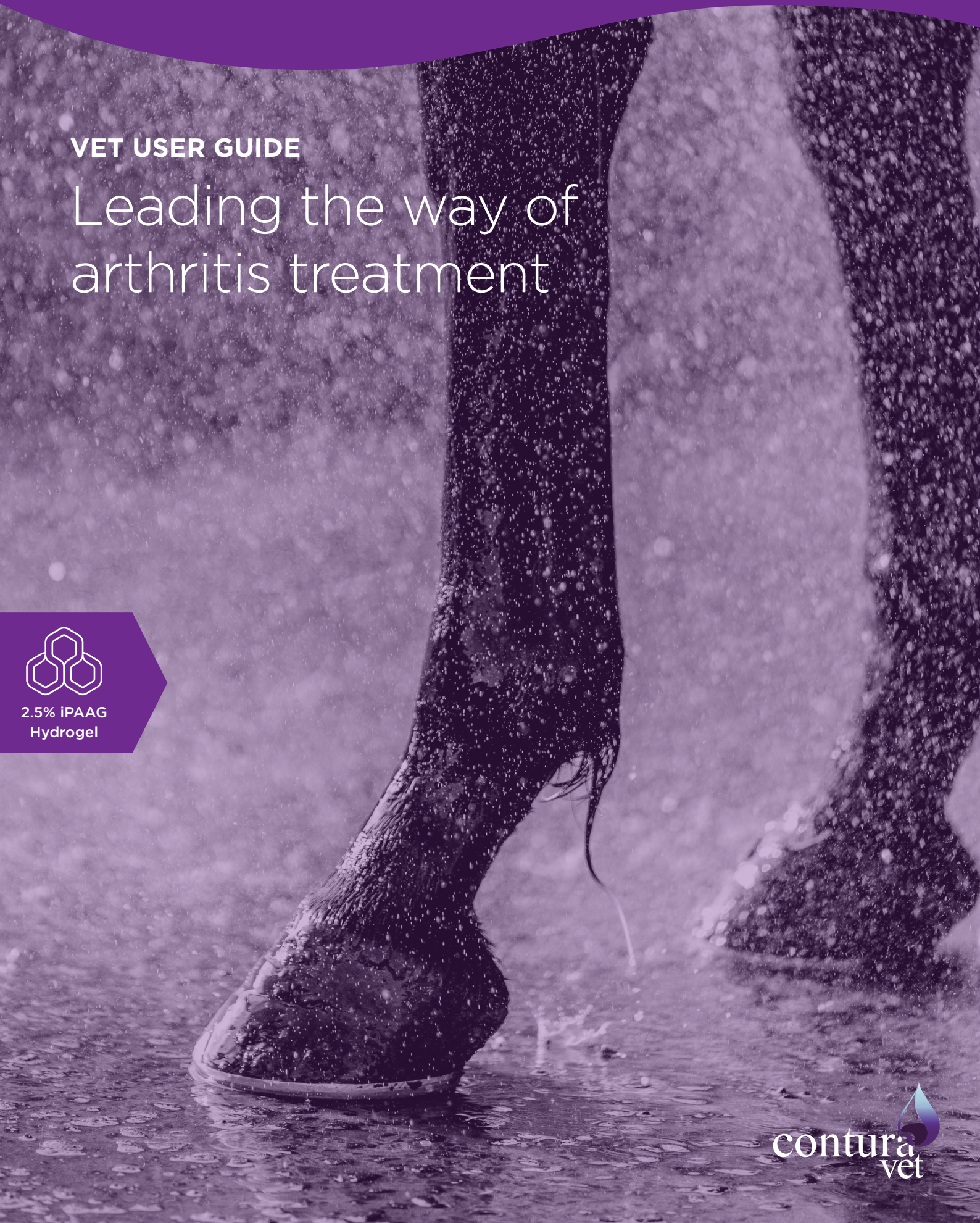
ARTHRAMIDVET®

PROVEN SCIENCE. PROVEN RESULTS.



VET USER GUIDE

Leading the way of arthritis treatment

2.5% iPAAG Hydrogel

contura vet

ARTHRAMIDVET®

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Product Description

ArthramidVet® is a unique and patented 2.5% iPAAG (intra-articular polyacrylamide) hydrogel offering an innovative, safe treatment option for veterinarians. It is used to manage joint pain and lameness in animals, including both early and late stages of osteoarthritis, through its precise therapeutic action on the synovial membrane.

ArthramidVet® is for intra-articular injection and is supplied in a sterile pre-filled 1 mL syringe sealed with a Luer lock fitting.

Administration

ArthramidVet® should be administered by a suitably qualified veterinarian familiar with intra-articular injections in the intended species. Animals may be sedated to minimise stress and discomfort. Strict aseptic conditions must be followed at all times.

A 20G to 23G needle is placed intra-articularly. Synovial fluid should be observed. Care should be taken to avoid unnecessary damage of the intra-articular tissue, as this may result in mild swelling lasting for 24 to 48 hours. Remove the protective tip cap from the ArthramidVet® syringe. Attach the syringe firmly into the Luer lock socket on the needle and make sure the syringe is correctly mounted. The amount of ArthramidVet® used is 1 – 4 mL. If necessary, hold the needle hub and unscrew the used syringe before reattaching a new ArthramidVet® syringe to continue the injection.

Dosages - Equine

There is evidence that there is a dose-dependent response. Doses for each joint may be altered depending on the size of the joint and the severity or chronicity of disease. e.g. mild, moderate or severe joint disease may be treated with either 1, 2, or 3 mL respectively. The following dosage recommendations have been made based on observed clinical responses to treatment;

Distal Interphalangeal: 1-2mL

Proximal Interphalangeal: 1 mL

Metacarpo/tarso-phalangeal: 1-3 mL

Carpus: 1-3mL

Tarsometatarsal/ Distal Intertarsal: 1 mL

Tarsocrural: 2-3 mL

Shoulder: 2-3 mL

Stifles: 1-2 mL per compartment

Published clinical trials indicate horses that partially respond to an initial treatment may benefit from a second dose at 4 to 6 weeks later.

Safety studies indicate that concurrent treatment of multiple joints in the same animal is safe and repeated doses can be given when clinically indicated, typically at 6 to 12 month intervals.

Mode of Action

When 2.5 iPAAG is injected into the synovial joint, it integrates into the synovial membrane (SM). Type A synoviocytes, which resemble macrophages in the intimal cell layer, capture the gel particles as part of their normal response to foreign materials.

The absence of a basement membrane in this layer, along with a rich vascular network, facilitates the gel's movement into the subintimal layer. This integration process (achieved by a combination of cell migration and vessel ingrowth) takes approximately 10-14 days, during which the gel becomes relocated within the sub-intima and with a intimal cell layer again lining the joint cavity.

Due to its capacity to attract and retain water, 2.5% iPAAG hydrogel is notable for maintaining its viscoelastic properties in situ. It is stable, biocompatible, and non-toxic, providing a long-lasting augmentation effect on the synovium and joint capsule.

This enhances the elasticity and tensile strength of the joint capsule, reducing stiffness and fibrosis. As a result, the joint's load transfer capabilities are improved, and in turn leads to a decrease in mechanoreceptor and nociceptor activation within the capsule itself.

The primary action of the hydrogel not only alleviates discomfort and restores function but in turn modulates the inflammatory response and eventually leads to improvements in joint fluid quality. Treatment therefore interrupts the vicious cycle of OA and restores joint homeostasis, giving long term benefits to the patient and their owner.

Why the Synovial Membrane Matters

Understanding the complexity of disease processes associated with joint pain remains a constant challenge in clinical practice and as with any disease process, an accurate diagnosis is essential. Arthritis describes inflammation of a joint and can occur after single or repetitive episodes of trauma. The term incorporates synovitis, capsulitis, sprain, intra-articular fractures, meniscal tears and osteoarthritis(OA). Sub- chondral bone injury also plays a role. These pathological conditions are described as:

'a group of overlapping distinct diseases which may have different aetiologies, but with similar biologic, morphologic, and clinical outcomes.'

Although conventional concepts of OA emphasise the direct and predominant involvement of cartilage and bone in OA development, it is increasingly recognised that the synovium is key to the central pathophysiological event of cartilage matrix depletion. In fact, it is now increasingly recognised that synovitis is the single most important factor that results in the pain of OA and lameness.

Case Selection

ArthramidVet® can be used in any joint that is displaying clinical signs of osteoarthritis such as joint pain, synovitis, effusion, reaction to flexion, lameness that responds to intra-articular analgesia, and those with abnormal joint findings detected using diagnostic imaging modalities such as radiology, ultrasonography, scintigraphy, CT, or MRI. It is recommended for use as early as possible in the OA disease process (e.g. synovitis and capsular stiffness), but is also highly effective in severe or chronic cases.

It is essential that anamnesis of data of ongoing infection, concomitant medication, surgery or potential fracture is reviewed prior to injection to prevent possible infections or use of the product for conditions other than for which it is indicated. ArthramidVet® has a non-pharmaceutical mode of action so is suitable in patients where other products, such as corticosteroids, may be contraindicated.

Case Management

Following treatment, animals should be rested for 48 to 72 hours. After this time, the animal can return to exercise concomitant to its degree of lameness until a response to treatment is seen — typically 2-4 weeks after treatment.

Training modification to accommodate the degree of lameness and the disease process being managed should also be considered. The use of alternative training methods such as swimming, water treadmills and dry treadmills are encouraged during the tissue integration phase and may offer better long term results.

Animals will typically show a gradual reduction in lameness from the first week after treatment and a concurrent reduction in reaction to passive flexion. After 4 to 6 weeks, no further improvement is expected, and re-examination at that time is indicated to either administer a second dose in those that have partially responded (around 10-15% of cases, depending on dosage) or to reassess the accuracy of the diagnosis.

It is important for owners to understand this time lag for a treatment effect to be seen as this contrasts with most conventional therapies. For this reason, and the long-lasting benefits seen, it is also reasonable to consider treating the animal during periods of reduced exercise demands or earlier in the animal's training programme than normally considered.

ArthramidVet® is fully permeable to salts and organic molecules. Veterinarians therefore may still consider using other IA medications, for example when a more immediate reduction in acute inflammation is required, with treatment of ArthramidVet® taking place 2-4 weeks before or after (depending on the IA medication used) to assist in longer term management of the affected joint(s). Concurrent use of NSAID's with ArthramidVet® may also be useful and carries no contra-indications.

KEY POINTS

- For use in joint lameness that responds to IA analgesia.
- Cases that have joint effusion and react to flexion appear to respond best.
- There is no requirement to see radiographic changes of OA to justify early treatment.
- Dose can be varied depending on the severity of the disease progression.
- Repeat injections can take place in 'partial-responders' 4-6 weeks after initial treatment.
- Training modification to accommodate the disease process being managed should be considered. Use of alternative training methods such as swimming, water treadmills and dry treadmills are encouraged during the tissue integration phase.

Post Injection Care

The animal should be **rested for 48 hours** after the treatment. If desired, a bandage can be applied around the injection site.

Within 1-2 weeks of treatment there remains a slight risk (<1:1500) that the animal could develop a transient oedema and tenderness at the treatment site as the tissue integration is occurring. If not caused by infection, these reactions are usually self-limiting and will resolve within a couple of weeks. Non-steroidal anti-inflammatory drugs (NSAIDs), cold therapy, rest and bandaging can be administered for pain relief and to reduce swelling. Joint lavage to remove non-integrated hydrogel could be considered only in severe acute (<7 days) cases. Allergic reactions to Arthramid® Vet have not been observed.

In the event of any adverse event please contact us.

Information To The Owner

The owner of the animal should be informed about the indications, expected results, and potential complications associated with IA injections.
The owner of the animal should be advised that in case of complications the veterinarian who performed the ArthramidVet® injections should be contacted immediately for necessary treatment.

Storage

ArthramidVet® should be stored below 25°C (air conditioning) and protected from direct sunlight. Do not freeze. Do not store unsealed syringes for later use.

Terms and Conditions of Sale are available on our website www.arthramid.com.au/ www.arthramid.co.nz

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