



SARCOID FACT SHEET

Sarcoids are commonly occurring equine skin tumours that have been heart-ache for horses and their owners for centuries. Sarcoids are the most common skin tumour of the horse worldwide. Although common, sarcoids vary greatly in their size and appearance, the nature in which they grow and potentially spread and the way they respond to treatment. It is this variability that makes sarcoids such a challenge for both owners and veterinarians.

Some Important Sarcoid Facts

- Sarcoids are common; geldings appear more frequently affected.
- All equid species are susceptible - even donkeys and zebras.
- Although sarcoids are a type of tumour (cancer) they do not metastasise (spread to internal organs).
- Once a sarcoid horse, always a sarcoid horse! A horse with one sarcoid is likely to develop more.
- Sarcoids can develop anywhere on the horse's skin, but more common sites include the chest, groin, sheath and face (especially around the eyes and mouth).
- Sarcoids are likely to recur, regardless of treatment.
- Trauma of any nature to a sarcoid is likely to aggravate it.
- No two sarcoids are the same; each sarcoid needs to be assessed on an individual basis.
- Sarcoids can be unpredictable in all aspects of their development and treatment.
- There is no 'magic cure' for sarcoids.

Types of Sarcoids

There are 6 broad classifications for equine sarcoids; *occult*, *verrucous* (warty), *nodular*, *fibroblastic*, *mixed* and *malevolent*. It must be remembered that no two sarcoids are the same and sarcoids definitely don't read the text book, so many individual tumors may contain characteristics of several different types.

- ***Occult Sarcoids***

Occult sarcoids appear as roughly circular hairless areas of skin (Fig. 1). They often are quite subtle early in their development and sometimes difficult to recognise. They can occasionally be mistaken for 'ring-worm' or even rub marks from tack. Occult sarcoids are commonly seen on the nose and side of the face, the armpit and on the inside of the thigh or groin. If accidentally traumatised, these sarcoids have the potential to rapidly develop into one of the more serious types of sarcoid.



Fig. 1: Occult sarcoid on the nose which has been delineated by black lines.

- ***Verrucous Sarcoids***

Verrucous sarcoids are ‘wart-like’ in their appearance (Fig. 2) and are often greyish in colour. The skin can crack easily and flakes of scale can often be rubbed off from the surface. They can appear singularly or in groups that merge into larger lesions. Manipulation of verrucous sarcoids is usually not painful but remember that interference with verrucous sarcoids (as with any sarcoids) can lead to rapid transformation into more serious and aggressive forms of sarcoids.



Fig. 2: Verrucous (warty) sarcoid on the chest of a horse.

- ***Nodular Sarcoids***

Nodular sarcoids are firm, round nodules (Fig. 3) that can appear anywhere on the horse’s body but are often seen in the armpit, on the inside edge of the thigh and groin as well as under the skin of the eyelids. They can be singular or multiple and quite variable in size. Nodular sarcoids are usually covered by a layer of normal skin but can also be ulcerative. They are usually firmly attached to the skin overlying them but sometimes they are freely moveable under the surface. Once again, like all sarcoids, interference either by accident or intentionally via biopsy or by inappropriate treatment can agitate nodular sarcoids and result in rapid growth and possible change into more dramatic forms of sarcoids such as the fibroblastic type.



Fig. 3: Ulcerated nodular sarcoid on the inner thigh.

- ***Fibroblastic Sarcoids***

Fibroblastic sarcoids are fleshy masses that grow quickly, bleed easily and often have ulcerated surfaces (Fig. 4). They look very like exuberant granulation tissue (‘proud flesh’) and in fact, can develop at the site of a wound. They can be found anywhere on the horse’s body and can develop rapidly from other types of sarcoids such as verrucous and nodular forms.



Fig. 4: Fibroblastic sarcoid with the typical ulcerated, fleshy mass appearance on the sheath.

- ***Malevolent Sarcoids***

The malevolent sarcoid (Fig. 5) is the most aggressive of all the sarcoid types. It can rapidly spread over a wide area of the horse’s body and grows in size just as quickly. The most likely appearance of the malevolent sarcoid is that of ulcerative nodular-like lesions group in large bundles. This condition can be so aggressive in nature that often there are no treatment options. Thankfully, malevolent sarcoids are very rare.

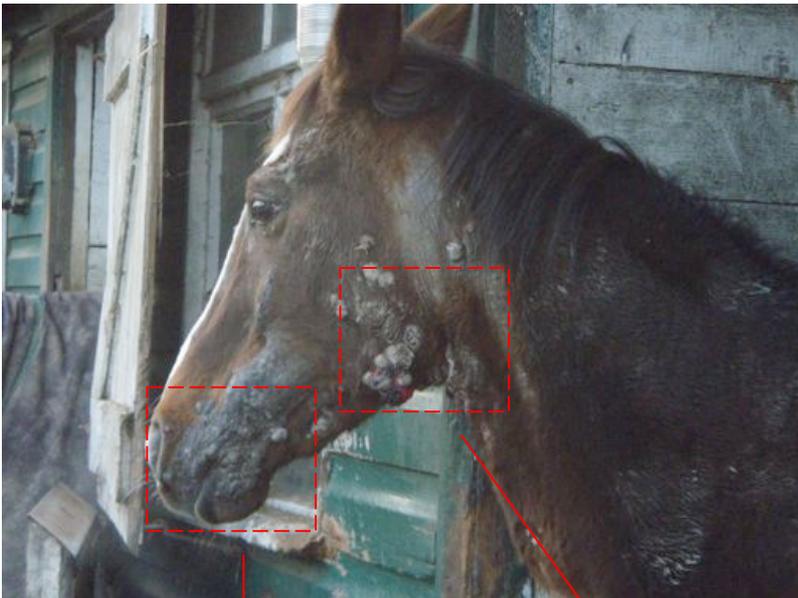


Fig. 5: Malevolent sarcoid showing ulcerated nodular and verrucous type sarcoids. A large part of this horse's body was covered in sarcoids.

- *Mixed Sarcoids*

The term 'mixed sarcoid' is somewhat of a sub-classification describing a lesion that shows qualities of two or more different sarcoid groups (Fig. 6). Sarcoids are commonly described as 'mixed' as a lot of sarcoid lesions will demonstrate characteristics of more than one type.



Fig. 6: Mixed sarcoid on the ventral abdomen. The left side of the sarcoid (blue outline) appears to be occult whereas the right side (black outline) has more of a verrucous appearance.

Sarcoid Treatment

Unfortunately there isn't a magical cure-all treatment for sarcoids. Apparently, there are over 40 different sarcoid treatments world-wide which clearly demonstrates that there is no one single method that will be effective in each and every case!

Horses should be treated at an early stage in the disease when lesions are small and treatment before 4 years of age appears to have a better prognosis. Each and every sarcoid is different; they are unpredictable by nature and no matter how similar two sarcoids look, a treatment that works for one might not work for another. It is extremely important to remember that each sarcoid needs to be assessed by a veterinarian on an individual basis before any treatment is started. Inappropriate treatment can easily convert a simple sarcoid into something very nasty, very quickly.

➤ *Benign Neglect*

Sometimes your veterinarian will advise you to just monitor a small sarcoid that has recently developed. They may suggest that you leave the sarcoid alone and watch for any signs of development or growth. Some sarcoids may stay very small without further development for years, so occasionally benign neglect is the treatment of choice. Of course, if the sarcoid starts to grow your veterinarian is likely to recommend an alternative treatment strategy.

➤ *Surgical Removal*

Surgical removal of sarcoids is certainly a viable treatment but must always be done with caution as failure to completely remove the sarcoid will predispose its recurrence, often more aggressively. Surgical removal can be effective for small sarcoids in safe areas but the failure rate is relatively high. The decision to remove a sarcoid surgically weighs on many factors including the type of sarcoid, its location, vital structures near by and how the sarcoid might be impacting on the horse's life. Nodular sarcoids often respond favourably to surgical removal which may be done under sedation and local anaesthetic in the field, or might need to be performed under general anaesthesia.

➤ *AW4-LUDES Sarcoid Cream*

AW4-LUDES cream, often simply known as 'Liverpool sarcoid cream' or as 'Knottenbelt's sarcoid cream' (after its creator Derek Knottenbelt from Liverpool University Vet School), is a topical chemotherapy treatment with the active ingredient being 5-fluorouracil. It also contains a variety of heavy metals, cytotoxic chemicals and natural plant oils. The cream is only available via special veterinary prescription from the University of Liverpool. Due to its relatively good success rate and a high demand for the product it may take several weeks for the cream to arrive and treatment to commence. The cytotoxic nature of the cream makes it quite dangerous to use; as such only veterinarians are permitted to apply the product. A typical treatment course involves 4 treatments with the 1st and 2nd treatments 24hrs apart followed by the 3rd 48hrs later and the 4th 48hrs after that. Using this cream, sarcoids usually look a lot worse before they get better as they become swollen and inflamed (Fig. 7). Localised swelling may also occur around the sarcoid that the horse can find painful, in which case anti-inflammatory drugs will be prescribed.



Fig. 7: Sarcoid before, during and 3mths following treatment with AW4-LUDES cream.

➤ *Cryosurgery*

The use of liquid nitrogen to freeze a sarcoid can be used for selective cases. Cryosurgery involves rapidly freezing and then slowly thawing tissues in order to kill the rapidly dividing tumour cells whilst sparing the normal cells. It can be time consuming and is only effective on small superficial lesions such as occult sarcoids. It can also be used on sarcoid tissue left following de-bulking surgery of very large sarcoids. There is a high recurrence rate following cryosurgery so is rarely a preferred treatment choice.

➤ *Intra-lesional Cisplatin*

Cisplatin is a chemotherapy drug that has shown good results when injected directly into sarcoids. The drug is mixed with oil to give it slow-release properties and injected 3-4 times at 2 week intervals. As cisplatin is a toxic drug, care must be taken when injecting into the sarcoid (Fig. 8). Again, local swelling and inflammation often occurs such that sarcoids treated with cisplatin often look worse before they look better.

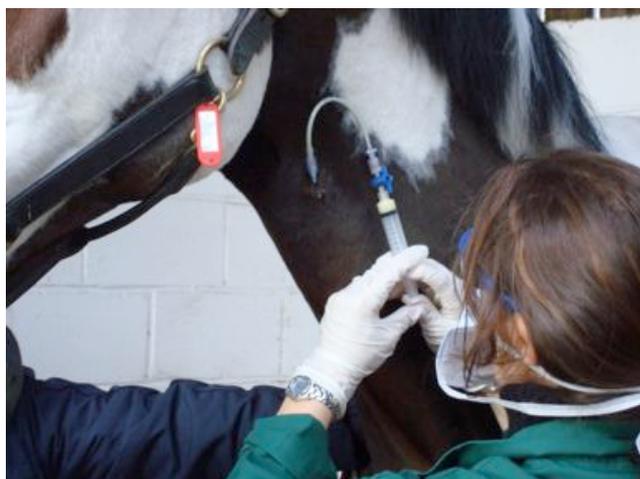


Fig. 8: Injection of cisplatin-oil emulsion into a sarcoid. Note protective clothing is being used as cisplatin is a toxic drug.

➤ *Imiquimod (Aldara)*

Imiquimod (Aldara cream) is an immune response modifier with potent antiviral and antitumour activity that is used for treatment of skin cancer and genital warts in humans. It has recently been used for treating sarcoids in horses and has shown good results although it is prolonged treatment compared to other treatments. A light layer of cream is applied over the sarcoid initially three times weekly. Some local swelling usually occurs and again, sarcoids look worse before they get better. It may take 2-4 months of treatment to see a decrease in tumour size and so this is not a quick option. Advantages of this treatment are that owners are able to apply the cream themselves (wearing gloves) and that it can be used over sensitive areas e.g. joints where more aggressive therapies would be too dangerous. Cosmetic results are usually good.

➤ *BCG Injection*

This method works reasonably well for nodular and fibroblastic lesions around the eyes but is much less effective elsewhere and should not be used for sarcoids on the limbs as these often become much worse for some unknown reason! Injection of BCG (used for human TB vaccination) is performed 3 times at weekly intervals. The method has significant risks and careful supportive medication is required at the time of each injection. The risks relate to the chance that the horse will react adversely to the protein in the injection.

As you can see, sarcoid treatment is not easy! If you think your horse has a sarcoid, or would like to discuss possible treatment options of your horse's sarcoids, please call the practice on 0131 445 4468 and ask to speak to one of our vets.