

Sarcoids

Sarcoids are the most common tumour in horses, accounting for approximately half of all equine skin tumours. They can affect all breeds, at any age (although most cases arise in young horses) and occur in both sexes. All equid species are affected (including donkeys and even zebras).

Typically, sarcoids are not painful or itchy, but they are locally invasive, persistent, and progressive. They greatly in size and appearance.

Over time, they may increase in size and the surface can become ulcerated and sore. They can appear anywhere but are commonly found around the face and head (especially the eyes and mouth), in the groin area and inner thighs, on the sheath, on the neck and chest, and in the axilla (armpit). They can also occur at the sites of previous wounds.

There are six types of sarcoid, classified based on appearance and clinical behaviour (for example, how aggressive they are or how they progress over time). Horses may have only a single sarcoid, or multiple lesions, and multiple tumours of different types.

1. Occult

Roughly circular, flat areas of hair loss (alopecia) and scaling. Occult sarcoids can be very subtle and are often confused for other lesions, such as ringworm, scars, or rub marks from tack.

These lesions are generally quite slow growing, but – as with all sarcoids – have the ability to transform into more serious types of sarcoid if interfered with (either due to accidental trauma or inappropriate treatment).

2. Verrucous ('warty')

These sarcoids have a raised, scaly appearance and are often greyish in colour. They appear like thickened areas of skin.

3. Nodular

Nodular sarcoids are firm, nodular and usually covered in a layer of normal skin (unlike the scaly appearance of verrucous sarcoids), but they can ulcerate. They may appear as a single lesion or in groups and vary in size.



4. Fibroblastic

These are fleshy masses, often ulcerated and 'angry' looking.

5. Malevolent

These are the most infrequent type of sarcoid, but they are aggressive, often rapidly growing and invading surrounding skin tissues or deeper structures. They are a possible consequence of repeated unsuccessful treatments but can occur spontaneously.

6. Mixed

Mixed tumours do occur, involving any (or all) of the above types of sarcoid. They often become progressively more aggressive, transforming into fibroblastic type sarcoids.

Cause

Sarcoids are caused by bovine papilloma virus (BPV), which causes skin cells to transform into tumour cells.

There is no evidence to suggest that sarcoids spread by direct (horse-to-horse) contact), although it has been suggested that flies may have a role in indirectly spreading parts of the virus to other horses. However, it appears that only some horses are genetically susceptible to the virus: i.e., not all horses exposed to the virus will develop sarcoids, but those who do have the genetic susceptibility will continue developing sarcoids (this may be one reason why the treatment of sarcoids poses so many challenges).

Diagnosis

Considering how common sarcoids are in the horse, diagnosis is typically made based on their characteristic clinical appearance. Biopsy is usually avoided, as any aggravation can cause the sarcoid to transform into more aggressive lesions.

Treatment

Unfortunately, as with many neoplasms (cancers) there is no single, entirely reliable treatment to eliminate all types of sarcoids. Treatment failures do occur, but early veterinary intervention and treatment while lesions are small offers a better prognosis.

Medical

- **Ligation and banding**

Banding or tying off the sarcoid with a ligature can be tempting for sarcoids with a stem or 'neck'. As blood supply to the sarcoid is cut off, the sarcoid slowly dies and drops off after a few weeks. However, this method should only be attempted by your vet, who can determine whether or not there is a root attaching the sarcoid to deeper tissues. Incorrect or inappropriate ligation can aggravate sarcoids and must not be attempted at home.



- **Chemotherapy**

Topical and intra-lesional chemotherapy (mitomycin, cisplatin)

- The application of topical chemotherapy creams can be useful in certain types of sarcoid. There are also drugs which can be injected into the sarcoid directly. The use of these chemotherapeutic agents does carry health and safety risks to humans, and therefore must only be used under the strict guidance of your vet.

AW4-LUDES ('Liverpool') cream

- A topical chemotherapy cream, the product is cytotoxic and should only be applied by a veterinary surgeon. Sarcoids often look much worse before they improve. The treatment can be painful and may cause some localised swelling around the sarcoid.

- **Photodynamic therapy (PDT)**

This involves the use of a topical cream, which is then exposed to light of a specific wavelength to activate the cream and destroy tumour cells. This method is widely used in human medicine, and a major advantage is the selectivity of the treatment – i.e., it avoids damage to healthy cells surrounding the sarcoid. PDT can also be combined with laser surgery for larger or more aggressive sarcoids.

- **Radiotherapy**

Radiotherapy uses radiation to damage DNA and protein in tumour cells. This often involves placing radioactive implants within the sarcoid. Good results can be expected with this method, but it is costly and only available at certain centres worldwide.

- **BCG vaccine**

The BCG vaccine is used to prevent tuberculosis (TB) in humans and is injected into the sarcoid to stimulate the immune system, which then 'attacks' the sarcoid. Availability of the vaccine is often limited, but this method can be useful in cases where other methods are unsuitable (for example, sarcoids close to the eye).

- **Electrochemotherapy (ECT)**

This involves injecting the lesion with a chemotherapeutic drug (cisplatin) and then applying high-voltage electric pulses. This procedure needs to be carried out under general anaesthetic and is only offered at certain referral centres.



Surgical

- **Surgical removal**

'Conventional' surgical incision has historically had poor success rates, with tumours often recurring. These recurrent tumours are often more aggressive and rapidly growing than the original. This may be because of inadvertent 'seeding' of tumour cells into deeper tissue layers, or activating virus present in normal skin around the sarcoid during surgery.

Obtaining good margins (removing healthy skin surrounding the tumour to ensure all the abnormal tissue is removed) can help prevent recurrence, but this does make closure of the wound challenging.

- **Cryosurgery**

This involves applying liquid nitrogen to freeze and destroy any remaining tumour cells after surgical removal of the sarcoid, to decrease the chance of recurrence. Success rates are variable, and tend to be more successful on small, superficial lesions (e.g., occult sarcoids).

- **Laser surgery**

A major benefit of laser surgery is the reduced risk of contaminating the surgical wound with tumour cells. It is thought that the laser damages tumour cells which may 'seed' during surgery, helping to prevent the sarcoid recurring. As such, results following laser surgery are generally very good. The heat from the laser also seals off the wound bed and any blood vessels.

This prevents bleeding but does mean that these wounds must be left open to heal by 'secondary intention'. The surgical wounds can look dramatic, but typically they heal well, with a good cosmetic outcome.

Occasionally, other forms of treatment (e.g., PDT) can be combined with laser surgery to further improve the outcome.

Laser surgery may be performed under standing sedation or general anaesthetic, depending on the number, size, and extent of the sarcoids present. The typical location of many sarcoids (for example, in the groin or on the sheath) often necessitates a general anaesthetic to ensure full visualisation of the sarcoids so the surgeon can obtain adequate margins.

One further benefit of laser surgery is that all sarcoids can typically be removed in one fell swoop, avoiding the need for multiple repeat veterinary visits (such as to apply topical creams). Despite the cost of this method, it may be the quickest and most effective way of achieving a 'sarcoid-free' horse.



Other

Various topical ointments and 'natural' remedies are available and marketed for the treatment of sarcoids. Many of these do not have little scientific evidence to back their use, and the safety and efficacy is questionable. As discussed above, inappropriate treatment or interference with sarcoids can aggravate the lesions, making them more aggressive, invasive, and more challenging to treat long-term.

Summary

As any treatment can aggravate the sarcoid, it is essential that the correct method is chosen in the first instance, depending on the type of sarcoid and its behaviour.

It is important to remember that sarcoids are a type of skin cancer, and as such they can behave unpredictably and aggressively, particularly when interfered with. Multiple, unsuccessful treatments are likely only to make matters worse, and we therefore strongly recommend that you seek veterinary advice prior to any sarcoid treatment.

All the vets at Abbey Equine are happy to discuss any concerns about sarcoids, and the treatment options available. It is often possible to make an initial assessment based on good quality photographs sent via email, although a clinical examination is often necessary to fully assess the lesions and best advise on a course of treatment.

