**Skin Diseases Refresher**

**Melanoma**

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**Disease profile**

A benign neoplasm of melanocytes that commonly affects the skin (and other organs). The condition may represent a storage disease rather than a true neoplasm.

One of the most common neoplasms encountered in equine practice that is almost ubiquitous in grey horses over age 8–10 years. There is a very low prevalence of melanomas in non-grey horses.

The tumours are usually noninvasive but can ulcerate with discharge of a thick black tarry material and blood. They are most often found in the groin, perineal skin, the lips and eyelids. The parotid lymph nodes and salivary glands are also commonly affected, and this can cause vascular impingement related problems. They may interfere with tack or with adjacent structures.

A highly malignant form of melanosarcoma that can be distinguished clinically in some cases by the presence of blue-black or pinkish granules in the black mass, is a rare condition.

**Clinical signs**

Spherical or ovoid black masses closely associated with the epidermis and not moveable by digital pressure (Fig 1). There may be single lesions of variable size or groups and chains (Fig 2).

Spread to local lymph nodes or growth in lymphatic chains such as alongside the jugular vein and carotid in the jugular furrow are not uncommon. Examination of the gullet pouches will often confirm the character of the melanomas. Both melanoma and melanosis may be seen. The former appear as distinct spherical densely black masses while the latter appear as splashes of melanin on the walls of the gullet pouch. Both of these forms are more commonly associated with the lateral compartment over the maxillary artery.

Sporadic development in any body site can cause bizarre atypical symptoms related to direct pressure e.g. ataxia with melanoma formation in the spinal cord and Horner’s syndrome with melanoma formation in the parotid salivary gland, lymph

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**Fig 1:** The typical appearance of multiple melanomata around the anus of an aged grey mare.

**Fig 2:** Ulceration of the expanding melanoma seen in this case can present problems in clinical management.
nodes or jugular furrow. Ulcerated lesions discharge a thick black material with variable bleeding.

**Investigations**

Biopsy is not usually necessary but fine needle aspirate of any suspected lesion will rapidly identify the black nature of the tumour. It is seldom necessary to stain the cells.

Significant haemorrhage can follow biopsy of suspected melanoma in the parotid region and can itself produce focal sweating of the head and neck or neuropraxia leading to temporary or permanent Horner’s syndrome. Ultrasound guidance for needle biopsy of deeper structures can be helpful.

**Differential diagnosis**

- Equine sarcoid (see elsewhere).
- Fibroma (see elsewhere).
- Allergic collagen necrosis (see elsewhere).
- Neoplasia or infection of the salivary glands.
- Lymph node abscessation.
- Melanosarcoma: black, ulcerated tumours incorporating paler blue-black or pink areas are often more dangerous and may be highly malignant.

**Confirmation of diagnosis**

Spherical to ovoid, tightly covered, shining black lesions in the predilection sites of grey horses greater than age 7–9 years are pathognomonic for the condition.

Needle or punch biopsy of the lesions is easy and gives immediate confirmation. For small isolated lesions excisional biopsy is probably preferable.

Endoscopic examination of the mucosal surface of the guttural pouches is a useful aid to diagnosis and provides some indication of the types of tumour present. Extensive tumours in the pouch may lead to Horner’s syndrome or pharyngeal paralysis.

**Management**

Although single isolated lesions may not cause overt problems, they will undoubtedly grow bigger, and early removal while small prevents possible later ulceration and the need for more radical excision. Unlike the case in the equine sarcoid complex, early surgical interference does not lead to a sudden increase in invasiveness or malignancy.

Medical management by the oral administration of

**Fig 3:** Benign neglect of early melanoma such as is shown here, although often advocated, can lead to the development of a mass for which effective treatment may not be possible.

**Fig 4:** Not all melanomas occur in the typical sites and show the characteristic flat mushroom-shaped lesion. This pedunculated lesion (a) between a horse’s legs and the lesion at the extremity of the tail (b) were both histologically classified as benign melanoma following surgical removal.
cimetidine (at 3.5 mg/kg bwt q. 12 h) for up to 3 months has been reported to reduce tumour growth in a few cases. Extensive lesions or those in difficult sites are probably not amenable to any form of treatment (Fig 3).

If treatment is required one of the following methods is usually employed:

a) Surgical excision is only feasible for isolated lesions not associated with confluent melanoma masses (Fig 4a).

b) Cryosurgery using 3 freeze/thaw cycles of the tumour following surgical debulking of the most accessible masses can be used but carries a poor success rate.

c) Laser extirpation is an effective means of removal of the tumour and tumour bed with good recovery rate and a low incidence of recurrence (Fig 4b).

d) Cisplatin treatment by intralesional injection has been described.

There are as yet no preventative measures, and owners of grey horses should expect melanoma development at some stage. Some work has been done towards the possible development of a vaccine to prevent the disease, but this has not yet been clinically proven to be effective, nor is it commercially available.