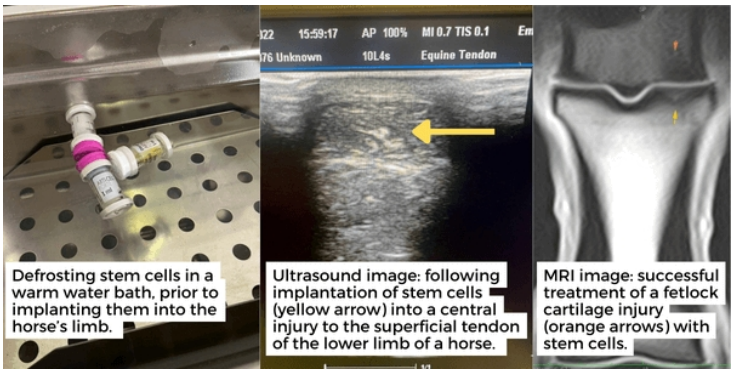
Stem cell treatment ? what?s new?



What are stem cells?

Stem cells are an undifferentiated cell of a multicellular organism which are capable of giving rise to indefinitely more cells of the same type. They are used in musculoskeletal injuries of the horse to improve the quality of repair tissue in injured tissue.

Types of stem cells

Traditionally we obtained cells via a large bore needle placed into the sternum of the horse and extracted bone marrow. Stem cells from the bone marrow were cultured in a laboratory over 30 days and were re-implanted into the injured region of the horse. These cells then differentiated into the environment they were placed in, for example tendon tissue in the case of a tendon injury.

Now, we have the option of commercially available stem cells, thereby avoiding having to harvest the cells from the horse, we can simply buy them in small vials.....amazing!!! There are two types available, one derived from donor horse's blood, which is treated to make the cells transform into a cartilage type of cell, this is useful in cases of osteoarthritis, whereby the cartilage layer of the joint is damaged.

The other type is humanely and ethically harvested from umbilical cord blood, which is wonderful as these cells can transform into any cell type! They can be implanted into joints, tendons and ligaments and will transform according to the environment in which they are implanted which is particularly helpful!

The clinical use of stem cells

Stem cell treatment is not a magical cure for these musculoskeletal injuries, but they do improve the quality of healing and prevent the likelihood of reinjury most importantly. We used the cartilage cells in a lovely horse called Rosie a while back who had a severe cartilage injury in her fetlock joint diagnosed on MRI and she is now back as a sound ridden horse! We have also recently implanted the umbilical cord type cell into a soft tissue injury of an event horse, who is still undergoing intensive rehabilitation, we will keep you posted!