Flexural Limb Deformity
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Flexural deformity or “contracted tendons” is a common condition of foals. This term is used when the foal is unable to fully extend the limb and the joint involved is held in an abnormally flexed position. Contracted tendon implies that the tendon is abnormal when in fact it is the muscle and tendon unit that is short relative to the associated boney structure. The joint capsule may be involved as well. Typically the deformity is named according to the joint involved. The problem can involve more than one limb and more than one joint in the foal or it can affect only one joint. Flexural deformities present at birth are called congenital deformities. This condition can lead to dystocia. A caesarean section may be required to deliver the foal depending of the severity of the deformity. Congenital flexural deformities most often involve the fetlock(s), knee(s) and coffin joints(s). It is rare for the hock(s) to be involved.

The cause for a congenital flexural limb deformity is often unknown. Intrauterine malposition is commonly mentioned as the cause for the abnormality. This is possible in the case of an abnormally large foal relative to the size of the mare. However, this is more likely the exception and not the rule. Other potential causes include genetic predisposition and agents that interfere with normal embryonic development.

The problem is easily recognized at the time of birth and should be evaluated by your veterinarian. The severity of the deformity can range from mild to severe. Foals with severe flexural deformities are often unable to stand. Mild deformities can be overlooked if the foal is in deep bedding. Most mild cases will self-correct with limited exercise. Treatment options may include controlled exercise, bandaging, analgesics, splints, casts, oxytetracycline, physical therapy, farriery, and surgery. The method of treatment that is chosen will depend on the severity of the condition. A combination of the treatment methods is usually chosen.

Controlled exercise is an important part of the treatment protocol provided the foal is able to ambulate. The foal may require assistance to stand especially if a splint or cast is applied. The administration of analgesics is an important component of the treatment plan as well. The affected limb(s) may be painful when the foal is allowed to exercise, is undergoing physical therapy, or has the joint held in extension by a splint or cast. Judicious use of non-steroidal anti-inflammatory drugs is warranted since ulceration of the gastrointestinal tract and renal damage are potential detrimental side effects. The administration of oxytetracycline intravenously is another component of medical treatment. The exact mechanism of action is unknown. The duration of treatment depends on the severity of the deformity as well as the response to the medication. Most often oxytetracycline is used in combination with other treatment modalities. Oxytetracycline can affect renal function and this will need to be considered especially if the foal is systemically ill. Physical therapy in the form of manually extending the foal’s limbs can be performed multiple times throughout the day. This may not be possible if the foal is wearing splints or casts. Another form of physical therapy is encouraging the foal to walk.

The use of toe extensions will protect the toe from excessive wear and increase the tensile forces in the flexor tendons during walking. The toe extension will delay break over and help prevent the foal from knuckling forward. Toe extensions can be used in cases of flexural limb deformity
involving the coffin joint and/or fetlock joint. Significant forces can be applied to the dorsal hoof wall leading to separation and distraction of the dorsal hoof wall. Toe extensions must be monitored carefully.

Bandaging, splints, and casts are also effective forms of treatment. Extreme caution and diligent monitoring is very important when using these treatments to prevent pressure sores. Splints and casts can be custom fit to the contour of the limb. This helps decrease the likelihood of developing pressure sores. Splints have the advantage of being able to be changed easily. As the deformity improves new splints or casts will need to be applied.

Surgical intervention is not usually necessary with congenital flexural limb deformities. Surgery may be indicated in severe cases or those that do not respond to non-surgical treatments. Surgical treatment is most often used in cases involving the carpus.

It is important to remember there are multiple options for successful treatment of flexural limb deformities. Key factors are working closely with your veterinarian with attentive monitoring of the condition and treatment protocols and progress. It may be a difficult start to life for the foal, but there are veterinary solutions available that will have the foal steady on his feet and running with the herd.