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## Essay: Cauda Equina Syndrome (CES) by Claire Boswell-Ruys

- Description

The cauda equina is the name given to the hair-like bundle of nerves that branch off from the bottom end of the spinal cord. Cauda Equina Syndrome (CES) occurs when there is enough pressure on the cauda equina nerves to stop them sending messages to the organs, muscles and skin they supply. This pressure can come from a number of things, some common causes of pressure include a ruptured vertebral disc; tumors; infection; arthritis; spinal stenosis (narrowing of the spinal canal); and trauma.

The symptoms of CES may include back pain, abnormal bladder and/or bowel function, tingling or numbness in the groin, over the buttock region and/or inner thighs, and pain, numbness or weakness in one or both legs. Diagnosis of CES is based on clinical symptoms and an MRI or CT scan ordered by a medical specialist.

- Treatment

CES of sudden onset is regarded as a medical emergency. Management requires surgical decompression to relieve the pressure on affected nerves. Surgery performed as early as possible can be the difference between full recovery and permanent nerve damage.

If CES is caused by a trauma surgery may be required to remove blood, bone, tumors or a herniated disc. If the syndrome is due to an inflammatory condition e.g. ankylosing spondylitis, anti-inflammatory medications can be effective. If bacterial infection is the cause then an appropriate course of antibiotics can be used to treat it.

After the cause of the nerve damage is removed, rehabilitation may include physiotherapy and occupational therapy to improve outcomes resulting from lower limb dysfunction. Specialised nursing education in regards to bladder and bowel function may also be required.

- Prognosis

The prognosis for CES is variable and primarily dependent upon the severity and duration of the compression upon the nerves. The longer the time before intervention to remove the nerve compression, the greater potential for more permanent damage to the nerves. Permanent damage to the nerves can result in impaired function of the bowels, bladder and sexual organs. Weakness and altered sensation in the legs can also result. Specialist education and support is required to minimise the impact on people's lives. If the nerve compression is resolved early enough, the nerves can regrow and function of the organs supplied by the nerves can return to normal, but residual dysfunction can occur. Nerve regrowth is extremely slow, so recovery time can occur over several years.

- Support services

Cauda Equina Resource Centre: <http://www.caudaequina.org/>

Link to latest Australian research:

<http://www.ncbi.nlm.nih.gov/pubmed?term=%22Cauda%20Equina%20Syndrome%22%20australia%20%22007%2F01%2F01%22%5BCreate%20Date%5D%3A%223000%22%5BCreate%20Date%5D>