ARTICLE

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Raise your awareness of the "Red Flags" for early detection of Cauda Equina Syndrome

Cauda Equina Syndrome ("CES") is a clinical emergency and must be treated urgently to avoid severe, long-term, irreversible neurological damage to the patient. Failure or delay in the diagnosis can be catastrophic for patients and leave the GP vulnerable to claims of medical negligence. On behalf of members, at Medisec we have managed several clinical negligence claims in recent years relating to failure/delay in diagnosing CES.

As the condition is rare, GPs may only see a few presentations of CES in the course of their career. It can happen that the condition is not evident at the patient's initial presentation. Sometimes it can take time before the symptoms are clear enough to suspect the diagnosis. With this in mind, we hope this article will be helpful in raising your awareness of the red flags for early detection of this debilitating condition and thus reduce the risk of significant disability for patients.

What is Cauda Equina syndrome?

The Cauda Equina, (latin for 'horse tail') is a bundle of nerves originating in the spinal cord and passing through the spinal canal in the lower back, supplying the bladder, bowel, sexual organs and legs. When these nerves are compressed, the resulting symptoms are of saddle area numbness, difficulties with bowel and urinary control, and motor and sensory dysfunction in the lower limbs; this condition is known as 'Cauda Equina Syndrome'.

If these nerves become severely compressed or damaged, and urgent decompression surgery is not undertaken quickly, the impact to the patient can be devastating. It can cause permanent numbness and weakness in the patient's saddle area and legs and loss of bladder and bowel control.

In summary, CES is a clinical syndrome with signs and symptoms of dysfunction of the cauda equina nerves. Missed or delayed diagnosis of CES may result in avoidable paralysis, incontinence, sexual dysfunction and chronic pain.

Impact of a delayed diagnosis of CES

In addition to the catastrophic harm to patients, there are substantial Medico-Legal consequences of missed or delayed diagnosis of CES. The State Claims Agency *Clinical Risk Insights* Winter 2020, highlights the number of incidents, claims and costs over a ten-year period:

CES data 01/01/2008 – 31/12/2018	Total
Number of incidents reported	42
Number of claims received	71
Number of claims finalised	41
Total paid amount on finalised claims	€20,901,261

In addition to the devastating consequences for the patient, there is also the toll on the clinician involved in the unexpected outcome. Involvement in any patient safety incident can significantly affect both the professional and personal lives of GPs, who can often become the "second victim".

Red flags of CES

There are many causes of CES, but Fuso FAF, et al (2013) suggests that the most common cause is that of a lumbar spine disc herniation, which occurs most frequently between the ages of 31-50. CES is a rare condition and thus can be challenging to diagnose and manage. According to the Imperial College London, it occurs in 1-3 per 100,000 population and accounts for approximately 0.04% of all patients presenting with low back pain. It is vitally important to be aware of the presenting symptoms and red flags of CES, and to

ensure that the patient is asked the relevant questions, as if any of these symptoms are present they require prompt action and urgent referral.

Symptoms include:

• **Bilateral sciatica**
• **Severe or progressive bilateral neurological deficit of the legs, such as major motor weakness with knee extension, ankle eversion, or foot dorsiflexion.**
• **Recent onset of bladder dysfunction. Difficulty initiating micturition or impaired sensation of urinary flow. If untreated this may lead to irreversible urinary retention with overflow urinary incontinence.**
• **Recent-onset of faecal incontinence (due to loss of sensation of rectal fullness). If untreated this may lead to irreversible faecal incontinence.**
• **Recent onset of sexual dysfunction.**
• **Perianal or perineal sensory loss (saddle anaesthesia or paraesthesia).**
• **Unexpected laxity of the anal sphincter.**

Please refer to guidance from the National Institute of Clinical Health and Care Excellence (UK).

Spinal Injuries Ireland have developed a useful mnemonic aimed at raising awareness of the red flags of CES:

S	• Saddle Anaesthesia
P	• Pain
I	• Incontinence
N	• Numbness
E	• Emergency

When you suspect CES

CES is a neurosurgical emergency. After a thorough history and patient examination and where a diagnosis of CES is suspected, you should refer the patient immediately and urgently for assessment. The GP should ensure that they make clear detailed notes in the patient's medical records of the history, examination, including negative and positive findings, management plan and the differential diagnosis of CES.

Medisec is aware of cases where the GP, suspecting CES, correctly refers the patient to the Emergency Department (ED), only to find the patient, once assessed by the secondary care doctor, is discharged home with suspected non-specific lower back pain. In these circumstances, the GP should stand by their convictions! If the patient continues with symptoms and your suspicions of CES continue, take prompt action and refer the patient back to the ED. Consider telephoning the hospital doctor to relay your differential diagnosis. Remember to make a note in the patient's medical records that you have done so.

As a GP working in your own practice or in an out-of-hours service, be mindful of patients who present repeatedly with unresolved back pain issues, as this may be an additional red flag.

In summary

It is important for all clinicians to be aware of the red flags of this rare but devastating condition. If the GP suspects CES they should take urgent action and refer the patient for immediate assessment in secondary care. If the patient is discharged home with a different diagnosis but symptoms persist, the GP should communicate their concerns to the secondary care team and promptly re-refer the patient back to the appropriate specialist.

Keeping clear detailed notes in the patient's medical records is of paramount importance.

If you have any queries in relation to the above, please do not hesitate to contact a member of the Medisec advisory team.