# Cauda Equina Syndrome

James Booth

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# Cauda Equina Syndrome

What is it?

How it will (likely) present?

Classifications

Our role

When to act

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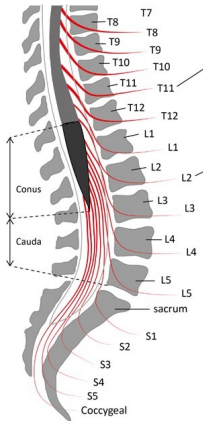
# CES – What is it?

Cauda Equina contains all the nerves supplying the bladder, bowel, sexual organs, 'saddle area' and legs

Cauda Equina "Syndrome" results from injury to one or more of these nerves which stops the bladder, bowel and sexual organs from working

CES is considered a potential emergency within spinal surgery (Fraser et al, 2009)

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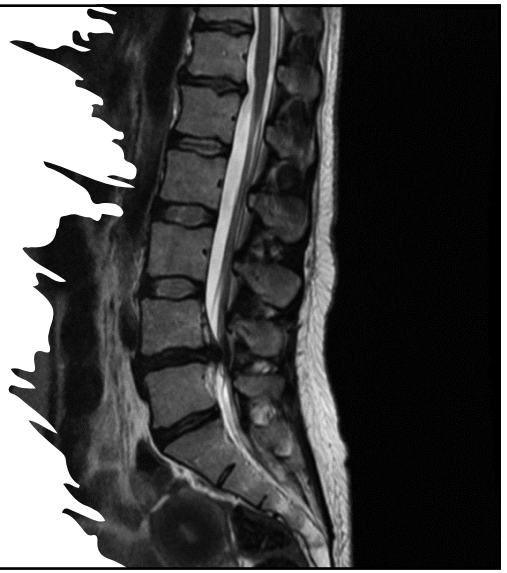
# CES – What is it?

Commonest cause - massive central lumbar herniation compressing roots of CE in lower spinal canal

L4-5 (57%), L5-S1 (30%), L3-4(13%)

Degenerative stenosis much less common cause



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# CES – What is it?

This compression leads to loss of function

of one or more of the nerve roots S2 and below which

comprise the cauda equina (Lavy et al. 2022)

CE nerve roots are vulnerable, and pressure from compression reduces their blood supply and compromises function

Nerve roots show mild demyelination after mild cauda equina compression

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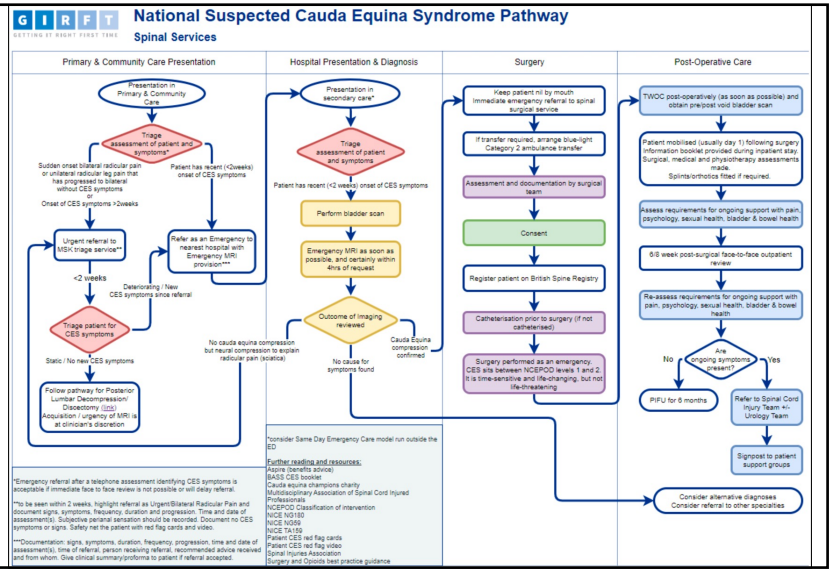
# CES – GIRFT?

**Emphasis on making good decisions and taking correct action early**

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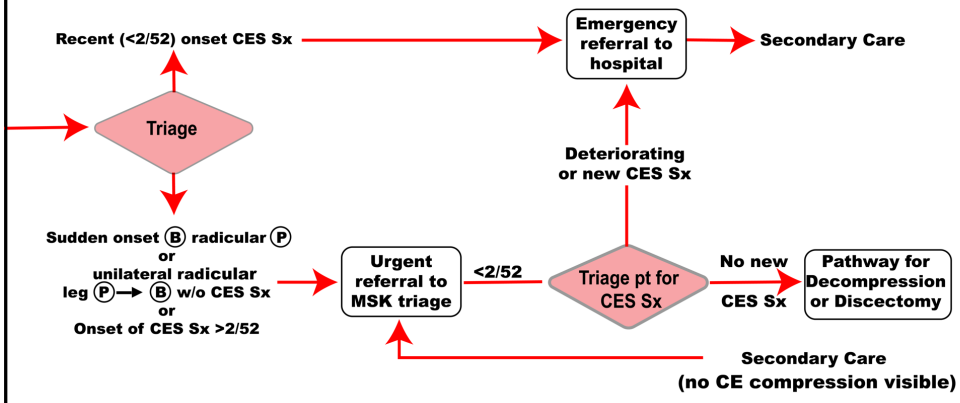
# National Suspected Cauda Equina Syndrome Pathway

## Primary and Community Care Presentation

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# CES – How will it present?

Symptoms are new and are deteriorating (<2weeks)

Development often takes a familiar pattern which you might encounter at any point along the pathway

-initially presents as low back pain

-then sudden severe sciatica

-sciatica often bilateral but not necessarily so

-may have associated weakness

-severe and sharp nerve pain

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# CES – How will it present?

-patient then notices difficulty initiating peeing

-then notices less frequency and 'some numbness in saddle area'

- May then start to notice episodes of incontinence

Can be a variation on this timeline so important to ask questions

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# CES – Classification

- Suspected CES (CESS)
- Early CES (CESE)
- Incomplete CES (CESI)
- CES with retention (CESR)
- Complete CES (CESC)

- Lavy et al. 2021

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# CES – Classification

<u>Suspected CES (CESS)</u>

-no BBSA sx, but bilateral sciatica or motor/sensory loss in legs

Or

-known large disc herniation on MRI

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# CES – Classification

<u>Early CES (CESE)</u>

-normal bladder, bowel and sexual function but some sensory loss in perineum or change in micturition

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# CES – Classification

Incomplete CES (CESI)

-alteration in urinary sensation but maintained executive bladder control

+/- perineal sensory changes, bowel or sexual sensation or function

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# CES – Classification

CES with retention (CESR)

-As with CESI but with painless bladder retention and overflow

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# CES – Classification

Complete CES (CESC)

-Insensate bladder, overflow incontinence, loss of perineal, anal or sexual sensation

-loss of anal tone

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# CES – Our role….

Careful questioning and case history is essential

Don't be afraid to ask awkward questions

Use simple language

Avoid leading questions

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# CES – Our role….

Bladder

- "Have you noticed changes in your ability to go for a wee?"
- "Can you feel when your bladder is full?"
- "When you wee, does it feel normal?"
- "Is the stream normal for you?"

- Be aware of other factors that may impact e.g. meds, prostate, UTI

Bowels

- "Have you noticed any changes in your ability to have a poo?"
- "Do you get an urge to go?"
- "When you do, does it feel normal?"
- "Can you push properly?"

- Constipation vs CE – full uncomfortable with urge to push vs no urge

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# CES – Our role….

Saddle anaesthesia

- Clarify where you are referring to
- Genitals, anus, perineum, cheeks, inner thighs
- "Have you noticed a change in your ability to feel touch between your legs?"

Sexual Dysfunction

- "If you are sexually active, have you noticed any changes in your ability to have sex which are not related to pain?"
- "Does it feel normal?"
- "Are you able to climax?"

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# CES – Taking Action

Take time to consider your decision – don't rush

Organise your thoughts

Talk to a colleague/on-call spinal fellow

Focus on the decision and not the outcome

Accept the uncertainty of the decision

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# CES – Taking Action

Referring to A&E

Explain why and how to your patient

Call ahead to on-call surgeon

Write a hand-over letter (clear and direct)

Follow up call to patient

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# CES – Taking Action

Not Referring to A&E

Explain why to your patient

Safety netting – reassure, information, literature

DOCUMENT!!