

Metastatic spinal cord compression (MSCC)

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What is the spinal cord

The spinal cord is the large collection of nerves that runs from the base of the brain to the upper part of the lower back. At the end of the spinal cord, the nerves separate into individual nerves to pass to the base of the spine. The bones of the spine (vertebrae) are situated around the cord and nerves in order to protect them. Smaller nerves called nerve roots exit from each segment of the spinal cord, and these nerves serve as the electrical connection between our brain and the main trunk of the body, arms and legs. This allows sensation to reach the brain and allows control of muscles including control of the bladder and bowel by the brain.

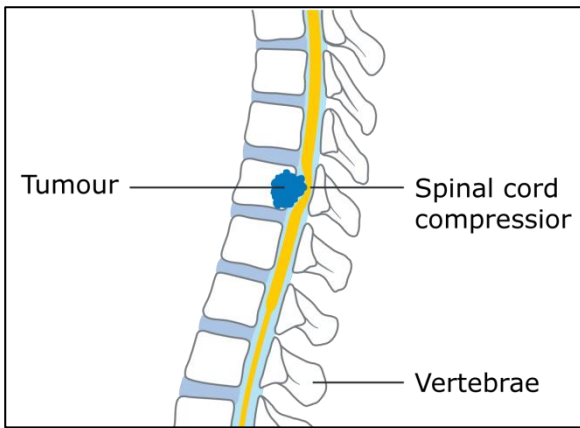
What is metastatic spinal cord compression (MSCC)?

Metastatic spinal cord compression is when cancer cells have spread from another part of the body and are causing pressure on the spinal cord and its nerves.

What causes MSCC?

This may happen because:

- The bones are affected by cancer; or
- A secondary tumour is damaging the vertebra; or
- The cancer has spread to tissues around the spine



An image showing a spinal tumour pressing on the spinal cord

Pressure on the nerves stops the nerves from functioning and leads to loss of sensation, muscle weakness and paralysis.

What are the symptoms?

This depends on the part of the spinal cord affected by the tumour and includes:

- Severe unremitting spinal pain – ache in the neck or back or area surrounded by the nerve roots (spreading around the side of the body or down the arms and legs).
- Nerve pain is sometimes described as burning or shooting.
- Night pain preventing sleep.
- Spinal pain aggravated by straining (for example, when opening bowels, or when sneezing or coughing).
- Some change in sensation and strength in the arms and/or legs.
- A new feeling of clumsiness or weakness of the arms and/or legs or difficulty in walking.
- The first sign for some people, is not being able to empty the bladder.
- Loss of control of the bowel and bladder.
- If left untreated spinal cord compression could lead to paralysis.

If you experience any of these symptoms, please contact:

Acute Oncology Service team, Seamoor Unit, North Devon District Hospital

Tel: 01271 334478 (7 days a week including bank holidays, 8am – 6pm)

All other times, please contact 01271 322577 and inform the operator that you are a cancer patient.

How is it treated?

The doctor needs to examine you. If they suspect MSCC, they may tell you to lie flat until tests have shown whether you have MSCC or not. The doctor will also arrange an urgent scan of your spine. This is usually an MRI scan, but may be a CT scan if you can't have an MRI. A bone scan may also be done, this does not diagnose MSCC but is used to check if there are any abnormal areas inside the bone.

The doctor will prescribe some steroids. These help reduce swelling and pressure on the nerves. Tell the doctor if you are diabetic or have had problems with steroids in the past.

If you have MSCC, the doctor will talk to you about the best treatment options for you. This will depend on the type of cancer you have, which part of the spine is affected and your general health. For the best result, treatment should start as soon as possible.

Radiotherapy treatment is used to shrink the spinal tumour. The aim is to take pressure off the spinal cord and hopefully improve the symptoms and help relieve the pain. Sometimes it can stop any weakness that is present from becoming worse.

It can take 2-4 weeks after radiotherapy to see changes and to show early signs of improvement. The return of some strength or sensation in the first week is an encouraging sign. No change at all in the first week means that recovery is unlikely.

Spinal cord compression is a serious condition that needs immediate treatment. If left untreated it will lead to permanent nerve damage and paralysis.

The North Devon District Hospital does not have a radiotherapy department so you will be referred to another hospital for treatment – probably the Royal Devon & Exeter Hospital.

Surgery is only suitable for a small number of people with MSCC. Whether you can have surgery depends on several factors, including type of cancer you have, the area of spine affected and how stable the spine is.

The aim of surgery is to remove as much of the tumour as possible and relieve pressure on the spine.

Surgery may involve removing several parts of the bones of the spine (vertebrae), along with as much of the tumour as possible, without weakening the spine. The surgeon may stabilise the spine using metal rods or bone grafts, but that would be explained in more detail if surgery is appropriate for you.

Possible effects of treatment

Radiotherapy will affect some of your normal tissues. You may feel tired and nauseous, but you will not lose your hair (except in area being treated). Depending on the area of the spine being treated you may experience side effects of vomiting or diarrhea both of these can be treated with medication.

If you are currently taking medication you will need to continue this, or even increase this since symptoms often worsen slightly before they resolve whilst having radiotherapy.

The effects of the radiotherapy will continue for up to 14 days after you have completed your course of treatment. You should continue to follow the skin care advice you have been given by your radiographers.

What is the prognosis or expected outcome of treatment?

There are some risks associated with treatment to the spine and your doctor will discuss these with you. They will usually ask you to sign a consent form. No treatment can be given without your consent.

Spinal cord compression can affect people differently. The care you need after treatment will depend on how well the treatment has worked and your mobility. Before you leave the hospital, the staff should organise any care you will need while at home.

Some people who lose the ability to walk or other movement before treatment may not get this back. In this case, you may need further care and support from staff at your cancer centre, local hospital or hospice. This will involve a team of healthcare professionals working closely with you and your family to organise a plan of care and rehabilitation to suit your needs.

If you have any questions about your care, you should discuss this with your doctor, nurse or physiotherapist.

References

RD&E Patient Information leaflet 'Radiotherapy Treatment For Metastatic Spinal Cord compression - Ref Number: CS14 001 001- Feb 2014'

Macmillan Malignant Spinal Cord Compression (MSCC) Diagnosis & Treatment – 2016

Spinal cord compression diagram: Cancer Research UK
(https://commons.wikimedia.org/wiki/File:Diagram_showing_a_tumour_causing_spinal_cord_compression_CRUK_081.svg), <https://creativecommons.org/licenses/by-sa/4.0/legalcode>

PALS

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email rduh.pals@nhs.net. You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

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