

# Epidural Sacral Injection study: effect of volume and triamcinolone on chronic lumbosacral radiculopathy?

**Submission date**  
02/04/2005

**Recruitment status**  
No longer recruiting

☐ Prospectively registered

☐ Protocol

**Registration date**  
18/05/2005

**Overall study status**  
Completed

☐ Statistical analysis plan

☒ Results

**Last Edited**  
16/12/2015

**Condition category**  
Musculoskeletal Diseases

☐ Individual participant data

## Plain English summary of protocol

Not provided at time of registration

## Contact information

### Type(s)

Scientific

### Contact name

Dr Trond Iversen

### Contact details

Gullveien 3

Terraak

Norway

7980

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trondiv@online.no

## Additional identifiers

### Protocol serial number

2137

## Study information

### Scientific Title

Epidural Sacral Injection study: effect of volume and triamcinolone on chronic lumbosacral radiculopathy?

## **Acronym**

ESI

## **Study objectives**

ESI (Epidural Sacral Injection) is a method of treating low back pain and radiculopathy that is the subject of considerable discussion. Although the method has been in existence for nearly 100 years, there are only a few good randomised controlled studies. In Nelemans et al (2000), evidence for the method is given as weak, and studies of a high scientific quality are sought. To investigate these factors in greater detail, randomised controlled studies are needed to clarify the effect of volume and steroids versus placebo.

Many patients with chronic low back pain and sciatica feel that they have few good therapeutic options besides surgery. Only a few patients with sciatica are suitable for surgical treatment. The surgeon needs a correspondence between the clinical level of radiculopathy and Magnetic Resonance (MR) diagnosis of disc protrusion. Many patients lack this correspondence. We therefore want to conduct the study on patients with clinical signs of lumbosacral radiculopathy, where the pain has lasted for more than 12 weeks (chronic) and where surgical treatment is not indicated at the time of inclusion due either to lack of correspondence between clinical and MR finding or low Oswestry Disability Index (ODI).

In our study, we wish to use a corticosteroid preparation with a weak anti-inflammatory effect. Triamcinolone acetonide in a strength of 40 mg/ml and a quantity of 1 ml meets this requirement. The effect is to be compared with placebo (2 ml NaCl 0.9% subcutaneously) and volume (30 ml NaCl 0.9% epidural). In many studies, injections have been used with a small volume (less than 10 ml). We will use a volume of 30 ml to be sure that the medicinal product is distributed throughout the epidural space in the lumbosacral column up to level L2. If our study can demonstrate a significant therapeutic effect for ESI of steroid, the method could become an important tool in the treatment of patients with low back pain and radiculopathy. We could also clarify in the study whether there are special subgroups of patients with radiculopathy (Signal changes in the disc, Covered prolapse, Free prolapse, Thickened nerve root, Disclosed nerve root) that respond better to steroid injection.

If the method can also be proven to be easy to perform, and associated with few serious complications and adverse drug reactions, it could become useful in both the treatment and rehabilitation of sciatica patients. At present, we do not know enough about the risk associated with use of the method, the incidence of side-effects and what should be regarded as adequate follow-up of patients. Hopefully, a study could yield valuable information on this. Given a good effect from the treatment and a low incidence of side-effects, we will probably be able to substantiate a positive gain in the form of reduced suffering for the individual in addition to a socioeconomic gain from patients recovering their health and being able to return to work more quickly.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Regional Committee for Medical Research Ethics in Norway (P REK NORD), 09/01/2004, ref: 105 /2003

## **Study design**

Randomised controlled trial

**Primary study design**

Interventional

**Study type(s)**

Treatment

**Health condition(s) or problem(s) studied**

Lumbosacral radiculopathy

Sciatica

**Interventions**

Epidural sacral injection with triamcinolone versus saline

**Intervention Type**

Drug

**Phase**

Not Applicable

**Drug/device/biological/vaccine name(s)**

Triamcinolone

**Primary outcome(s)**

Oswestry Disability Index (ODI)

**Key secondary outcome(s)**

1. European Quality of life measure (EQ5-D)

2. Fear-Avoidance Beliefs (FABQ)

3. Visual Analog Scale (VAS) back pain, leg pain, general health

4. Number of patients referred to all types of Back Surgery during follow-up

**Completion date**

31/12/2008

**Eligibility****Key inclusion criteria**

Age: 20-60 years

Sex: Both

Symptoms: Sciatic pain >12 weeks

Objective: Radiculopathy L3-S1

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

1. Indication of acute back surgery at the time of inclusion
2. Previous back surgery
3. Previous epidural or nerve root injection for low back pain or sciatica
4. Red flags
5. Yellow flags
6. The patient must not have noticed an improvement in symptoms or centralisation of pain from leg to back for the previous two weeks before inclusion
7. Pregnancy
8. Anticlotting therapy with Warfarin
9. Ongoing treatment with Non-Steroidal Anti-Inflammatory Drug (NSAID)
10. Magnetic Resonance Imaging (MRI) findings showing lateral recess stenosis of osteogenic aetiology, tumor, bleeding, dural fistula, synovial cyst, dysraphia conditions

**Date of first enrolment**

01/05/2005

**Date of final enrolment**

31/12/2008

## **Locations**

**Countries of recruitment**

Norway

**Study participating centre**

Gullveien 3

Terraak

Norway

7980

## **Sponsor information**

**Organisation**

University Hospital of North Norway - Neurosurgery department

**ROR**

<https://ror.org/030v5kp38>

# Funder(s)

## Funder type

University/education

## Funder Name

Health North RHF (Norway)

# Results and Publications

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Not provided at time of registration

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	13/09/2011		Yes	No
<a href="#">Results article</a>	results	07/02/2015		Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes