

Heterotopic ossification in Spinal Cord Injury

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Introduction:

Heterotopic ossification (HO) is a complication to Spinal Cord Injury (SCI). HO is ectopic bone formation in soft tissue surrounding a peripheral joint most frequently the hip.

Aetiology is unknown, incidence 10-78%. HO is associated with male gender, young age, completeness of SCI, infections and spasticity.

Clinical signs of HO are fever, swelling, erythema, stiffness of the joint and pain.

Laboratory tests include alkaline phosphatase, C-reactive protein (CRP) and creatine phosphokinase. Ultrasound and bone scintigraphy are useful to detect HO in early, CT and X-ray in later phase.

Case:

A 25-year old male experienced a complete paraplegia due to an epidural hematoma at level Th1/Th2.

The patient presented with fever from day 26 to 44 together with increased levels of CRP while white blood count remained normal. No focus of infection was identified.

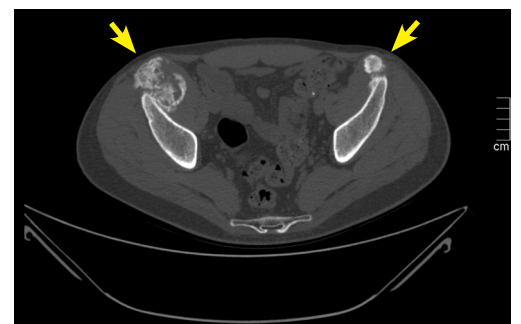
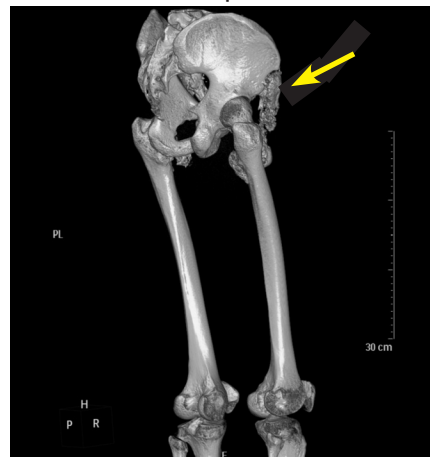
The patient experienced increased spasticity on day 52 and oral Baclofen was prescribed.

On day 90 the patient experienced a swollen lower right extremity, no deep venous thrombosis was found. Alkaline phosphatase increased from 64 U/l on admission to 246 U/l on day 94. The rehabilitation process was prolonged due to fever and discomfort.

Treatment with Diclofenac was started on day 103 and Etidronate added on day 162. An intrathecal Baclofen Pump did to reduce the increasing spasticity.

Results:

X-ray of the pelvic region on day 98 showed HO. CT-scan on day 176 showed massive HO around both hips.



Conclusions:

HO is one of the complications to SCI with a major impact on the rehabilitation process. Both diagnostic and treatment of HO poses a major challenge as this case shows. Due to high levels of alkaline phosphatase and risk of increased HO activity, the patient is still awaiting surgical intervention.