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### **X-ray, CT and MRI evaluation of vertebral trauma in young athletes – Radiological and clinical study**

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**Aim:** The aim of this study was to review cases of vertebral trauma in young patients (<40 years) during sports activity.

**Material and Methods:** During a 14 year period (1999-2012) , 9 young athletes with vertebral trauma sports activity were admitted to our hospital. 7 amateur athletes and 2 professional, 6 males and 3 females, mean age 26.5 years, range from 14 to 39 years. These trauma cases resulted mainly from falls during sea related sports and motor-cycling activity.

**Results:** X-ray was performed in all 9 cases. CT-scan was performed in all 9 cases. MRI-scan was performed in 7 cases. 7 patients (group A) were calcified as recent trauma (MRI was performed no later than 7 days from the injury) and 2 patients (group B) as chronic trauma. In group A we found 1 intramedullary contusion, 1 epidural hematoma, 4 vertebral fractures, 1 facet joint dislocation. In group B we found 1 sclerotic post traumatic bone change, 1 medullary transection.

**Conclusions:** Radiological evaluation-combination of x-ray, CT and MRI images is very useful mainly for the appropriate therapeutic approach of vertebral trauma.