Joint Meeting of Istanbul Spine Masters & ISMISS Turkey 2016

Current Trends in Spine Surgery

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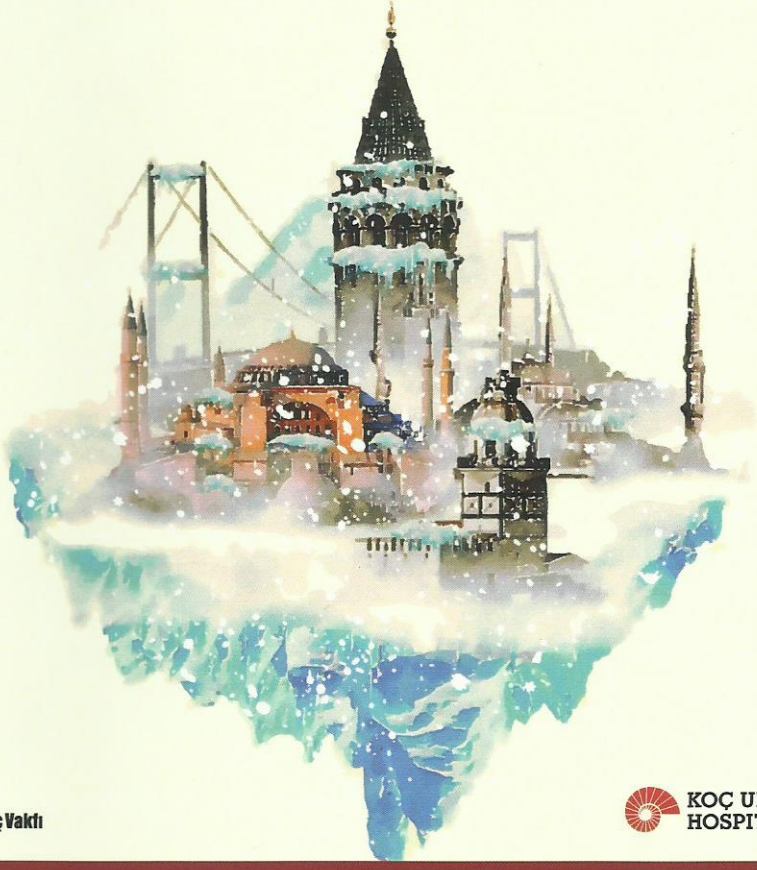

Vehbi Koç Vakfı

KOÇ UNIVERSITY HOSPITAL

PROGRAM BOOK

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CLASSIFICATION OF RADIOLOGICAL CHANGES IN BURST FRACTURES

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Purpose: Classification of radiological changes on vertebra corpus that occur in burst fractures as an indicator of high energy exposure

Introduction: Sometimes neurodeficiency is not observed in burst fractures while there may also be evident neurodeficiency and secondary organ injury and even death.neurodeficiency and secondary organ injury and even death.Several classifications have been developed for spine injuries However, there is no information about neurodeficiency in this classifications. Burst fractures are classified according to the pathomorphological changes based on their radiological appearance.

Material and Method: The tomographic images and medical charts of 80 patients who were diagnosed with burst fractureswere examined.

The patients were evaluated with respect to age, sex, fracture segment, neurodeficiency, secondary organ injury and radiological changes that occurred.The classification was made according to the changes on the tomographic images as an indicator of the energy that was exposed. Neurodeficiency status was classified according to the ASIA scoring system. Secondary organ injury was assessed.

Radiological changes were assessed and classified according to the axial sections on CT.

Results: Group 1: Fractures extendforward or laterally from corpus. In general, a piece of bone fragment maymove to the spinal canal. The width of this spur usually depends on the distance between the radix of the pedicles(because the pedicleis an obstacle before the bone fragment broken and detached from the corpus).

Group 2: There may be bone fragments in front of the corpus or/and near the corpus.There are some bone fragments that come closer to the PLJ but they don't lead to the separation and splitting of the posterior components, and don't move into the spinal ca

Group 3: There can be fractures in front of the corpus and at the sides of the corpus.There are bone fragments in the spinal canal. There are fractures on the lamina and spinous process.Interpedicular distance is extended.

PLJ is used as a reference point while classifying the burst fractures. If the bone fragmens can't reach the PLJ, it should be classified as Group 1. The fracture should be classified as Group 2, if it reaches the PLJ and splits into pieces by crushing the corner. The fracture should be classified as Group 3 if it passes through the PLJ and breaksthe posterior components

According to this classification system, secondary organ injury and neurodeficiency can be an indicator of energy exposure. If energy is high, the clinical status will be worse.