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PECULIARITIES OF DIAGNOSTICS OF COMPRESSION FRACTURES OF THE CHEST AND LUMBAR SPINE IN ADULT AND ELDERLY PATIENTS

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✓ ***Resume***

The study analyzed the results of the examination of 60 patients over 50 years old who were treated in the departments of neurosurgery and vertebrology of the AGMI clinic, the departments of spinal surgery of the Republican Specialized Scientific and Practical Center for Neurosurgery from 2012 to 2020. Based on the examination results, a differentiated surgical approach is recommended for each patient.

Key words: fractures, spine, diagnostics, adult and advanced age, compression fractures.

ОСОБЕННОСТИ ДИАГНОСТИКИ КОМПРЕССИОННЫХ ПЕРЕЛОМОВ ГРУДНОГО И ПОЯСНИЧНОГО ОТДЕЛОВ ПОЗВОНОЧНИКА У ПАЦИЕНТОВ ВЗРОСЛОГО И ПОЖИЛОГО ВОЗРАСТА

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✓ ***Резюме***

В исследовании проанализированы результаты обследования 60 пациентов старше 50 лет, лечившихся в отделениях нейрохирургии и вертебрологии клиники АГМИ, отделениях спинальной хирургии Республиканского специализированного научно-практического центра нейрохирургии с 2012 по 2020 гг. По результатам обследования каждому пациенту рекомендован дифференцированный хирургический подход.

Ключевые слова: переломы, позвоночник, диагностика, взрослый и пожилой возраст, компрессионные переломы.

KATTA VA KEKSA YOSHLI BEMORLARDA KO‘KRAK VA BEL UMURTQALARI KOMPRESSION SINISHLARINI TASHXISLASHNING O’ZIGA XOS XUSUSIYATLARI

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Respublika ixtisoslashgan neyroxirurgiya ilmiy – amaliy markazi

✓ ***Rezyume***

Tekshiruv davomida 2012 – 2020 yillar davomida ADTI klinikasi neyroxirurgiya va vertebrologiya bo‘limlari, Respublika ixtisoslashgan Neyroxirurgiya ilmiy – amaliy markazi spinal xirurgiya bo‘limlarida davolangan 50 yoshdan oshgan 60 nafar bemorlarda tekshiruvlardan olingan natijalar taxlil etildi. Tekshiruv natijalariga asoslangan holda har bir bemor uchun differensiallashgan jarrohlik usuli tavsiya etildi.

Kalit so'zlar: sinish, tashxislash, kattalik va keksalik yoshi, ko'krak va bel umurtqasi. compression sinish,

Relevance

Diagnosis of the stage and nature of spinal cord injury is one of the current problems of modern vertebrology and neurosurgery. Injuries to the spine are second only to injuries of the lower extremities, and account for 10-26% of injuries of the musculoskeletal system [4].

Spinal fractures are not seen on traditional radiography in 23-57% of cases. The emergence of more informative methods of radiation

diagnosis (multispiral computed tomography - MSKT, magnetic - resonance tomography - MRI) naturally increases the visualization of the stage and nature of the injury of the spine and spinal cord [1,2,3].

Compression fractures of the spine are one of the most common traumas in adults and the elderly. Every year, 1.5 million osteoporosis fractures occur in the United States, of which about 700,000 are compression fractures (Ensrud KE, 2011). According to Durova M.F. (1983), 7.6% of patients in the neurosurgery and traumatology departments have spinal fractures. injuries of the spine. According to O.M. Lesnyak (2011), people over the age of 50 have 7 vertebral fractures per minute, and every 5 minutes a fracture of the proximal part of the metaepiphysis of the thigh.

The above data set the following goals and objectives in the complex application of examination methods and analysis of the results obtained when compression fractures of the spine occur in the thoracic and lumbar region.

The purpose of the study: to improve the methods of examination of compression fractures in the thoracic and lumbar spine in elderly and elderly patients

Material and methods

Andijan State Medical Institute Clinic, Department of Vertebrology and Neurosurgery, Republican Specialized Scientific-Practical Center of Neurosurgery, Department of Spinal Surgery formed.

Complex instrumental examination methods were used after different degrees of injury or pain in the thoracic and lumbar spine. Of the patients examined, 19 (31.6%) underwent 2 different radiographic examinations, 7 (9.7%) underwent densitometry, 24 (40%) underwent MSCT and 44 (73.3%) underwent MRI, and 5 (8) underwent MRI. , 3%) underwent densitometry. The study focused on the area in which the compression fractures occurred, the mineral density of the vertebral body where the compression fracture occurred, and the nature of the fracture (stable or unstable).

Result and discussion

The most common classification of injuries to the thoracic and lumbar spine is the modified classification of F. Denis [6] and AO F. Megerli [5]. According to this classification, spinal injuries are divided into 4 groups: 1) compression fractures 2) explosive fractures 3) seat belt fractures 4) fractures.

Compression fractures account for approximately half (49.8%) of fractures in the thoracic and lumbar spine. In these types of fractures, the anterior musculoskeletal system of the spine is damaged, the medial musculoskeletal system is not damaged, and the organ may be damaged or undamaged due to the elongation of the musculoskeletal system. In fractures of this type, the load on the spinal axis is dropped, causing the spine to bend. Typically, fractures in this group are located in the upper covering plate, ponasal deformations of the vertebral body occur, and its anterior surface leads to disruption of the cortical substance.

The study found compression fractures in the thoracic and lumbar spine in 60 patients over the age of 50 years. Of these patients, 44 were due to falls from heights, 6 were due to a traffic accident, 4 were due to trauma, and 6 patients did not link the cause of the illness to any cause.

Compression fractures were most common in 18 (30%) patients in the VTh12 area and 13 (21.7%) in the VL1 area.

Analysis of the results of complex light examination methods showed that typical 2-type X-ray examinations reveal changes in the axis of the spine, displacement and dislocation of the vertebral body, signs of compression in the vertebral body, in some cases changes in paravertebral soft tissue.

In the absence of objective methods of assessing the quality of bone tissue, these criteria can be used in planning the operation. Two-energy X-ray obsorptionmetry (densitometry, DEXA) has become the “gold standard” in determining bone density, as it has the ability to check the density of the central part of the bone using this method.

The bone density value is expressed as the T criterion, which is a statistical indicator of the ratio of bone density and bone density of the subject in the control group of selected healthy volunteers. It is expressed in the number of standard deviations (SD) from the “normal” peak bone mass in the control group of patients. According to WHO, osteoporosis is considered normal if the T criterion is less than -2.5 SD, osteopenia if the T criterion is less than -1 to -2.5 SD, and normal if the T criterion is greater than -1.

MSKT allows you to get more information from the X-ray examination. Compared to X-ray examination, MSKT examination allows to describe compression fractures more accurately: to determine the degree of its deformation, the number of injured vertebrae, fracture of the arch, the mineral density of the compressed vertebral

body and the presence of signs of instability in compression fractures. Normal radiographic examinations do not show displacement of bone fragments into the spinal canal, and the reason for this is obstruction of the spinal cord, which is seen on MSKT examination.

MRI examination of the soft tissues of the spine can reveal the following components: longitudinal, intervertebral disc, spinal cord and changes in it (ischemia, edema, hemorrhage and cyst), extra and intradural hemorrhage and changes in the spinal body.

Complex examination methods in compression fractures of the thoracic and lumbar spine (radiological examinations, densitometry or MSCT, MRI) allow patients to accurately diagnose the disease (clearly see the area of the disease, know the stage of the disease, know the cause of the disease) and differentiate treatment allows you to choose the surgical method.

Conclusion

1. In compression fractures of the thoracic and lumbar spine, it is advisable to conduct complex examination methods using two types of radiography, densitometry, MCT and MRI. If screening methods are not fully utilized, insufficient information on the condition of the spine and spinal cord will be obtained.

2. Comprehensive X-ray examination of compression fractures of the thoracic and lumbar spine in elderly and elderly patients allows to quickly eliminate problems in diagnosing the disease, timely select a differentiated treatment method for each patient and predict possible complications after injury.

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