

ANALYSIS OF COMPLICATIONS OF SURGICAL TREATMENT OF THORACIC AND LUMBAR COMPRESSION FRACTURES IN ELDERLY PATIENTS

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Relevance of the Topic

Compression fractures that occur in the thoracic and lumbar spine occupy a significant place among the fractures that occur in the vertebral bodies. The disease is relevant in that it requires long-term treatment, reduces the level of professional ability to work, and causes a high risk of primary disability

According to the results of the study Sivyan Y. L. and Feigin L. E., in 89.8% of patients, disability of the first and second groups developed after complications caused by spinal cord injuries. Most of these patients are younger than 44 years old, 30.5% of patients aged 45-59 years, 1.9% of patients older than 59 years. The choice of conservative or surgical treatment of patients with injuries of the thoracic and lumbar spine causes various disputes.

It has been established that surgical stabilization of motor segments in patients with injuries of the thoracic and lumbar spine is based on biomechanical principles.

To date, among specialists there are different approaches and contradictions in the choice of a method for the treatment of compression fractures of the thoracic and lumbar spine in adult patients, which is the reason for the inconsistency of the treatment method (Dulaev A.K., Orlov V.P., Dadykin A.V. 2002 ; Pedachenko E. G., Kuschaev S. V. 2005; Kavalersky G. M. et al. 2006;).

In the surgical treatment of this type of pathological condition, vertebroplasty of the body of a broken vertebra or the installation of a TPF apparatus in these areas is mainly performed. However, complications in the form of leakage of bone cement from the vertebral body (into soft tissues or under the skin) occur in 1-2% of cases. There are also cases when the installed TPF device does not fully stabilize the vertebral body. In conclusion, it should be noted from the above that the causes of compression fractures of the thoracic and lumbar vertebrae in elderly patients are not fully understood.

Purpose of the study

To study the causes of complications after surgical interventions for compression fractures of the thoracic and lumbar spine in adults and the elderly.

Materials and research methods

The study material consisted of a total of 48 adult and elderly patients (over 45 years old) who were treated at the Department of Spinal Surgery of the Republican Specialized Scientific and Practical Center for Neurosurgery, the Department of Neurosurgery of the Andijan branch of the Republican Scientific Center for Emergency Medicine Center, as well as the department of neurosurgery and vertebrology of the ASMI clinic from 2012 to 2018). During the study, for the clinical diagnosis of patients, the following examination methods were used: complaints and anamnesis of patients, assessment of neurological status, x-ray studies of the affected areas in 2 projections (direct and lateral), densitometry, CT, MSCT and MRI research methods.

Research results

In a retrospective analysis conducted from 2012 to 2018, 11 of 48 patients treated in bed had complications of various forms. In almost all patients who developed complications after surgery, clinical signs in the form of pain and neurological symptoms were close to the preoperative state. When studying the causes of complications using modern and traditional methods of neuroimaging (radiography, densitometry, CT or MSCT and MRI), it was found that the following cases were neglected:

- In X-ray examination - the degree of deformation of the vertebral body, the degree of kyphotic deformation, the presence or absence of instability syndrome
- to the mineral density of the compressed vertebral body during densitometry or CT examination
- During the MRI examination, no attention was paid to such information as the presence or absence of stenosis (vertebro-medullary conflict) in the area of the spinal canal due to compression of the vertebral body.

In 3 patients with complications, migration of the TPF screw was noted due to low mineral density of the vertebral body in the installation area, migration of KRITO plates was noted in 3 patients, compression fractures occurred in 3 patients, pain syndrome due to vertebro-medullary conflict after surgery in 2 patients safety was observed.

Conclusions

When choosing a surgical method for the treatment of compression fractures in the region of the thoracic and lumbar vertebrae in elderly and senile patients, the degree of deformation of the body of the compressed vertebra, the degree of the angle of kyphotic deformity, a sign of instability in the area of the compression fracture were taken into account, the mineral density of the vertebral body was studied, the state of vertebro-medullary conflict was studied in the area of compression. Careful choice of surgical method will prevent possible complications.