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Research Article

COMPREHENSIVE TREATMENT APPROACH FOR UNSTABLE C3-C7 VERTEBRAL INJURIES WITH AN INTERBODY ENDOFIXATOR

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ABSTRACT

Injuries to the cervical spine are among the most severe musculoskeletal injuries. Neck injuries account for 7.6% of spinal injuries. At present, foreign and domestic scientists have accumulated extensive experience in diagnosing and treating injuries of the cervical spine. Many types of conservative and surgical techniques are available for treating unstable C3-Th-1 fractures of the spine.

In turn, years of observation have shown that the current methods have their limitations. There is no clarity in the choice of surgical or conservative treatment depending on the nature and severity of cervical spine injuries. The indications for surgery and the timing of the operation are incompletely developed. The

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criteria for treatment outcomes are not clear, and unsatisfactory outcomes often lead to repeated complex operations, which increases the number of disabled patients.

KEYWORDS

Endofixator, fixator, dislocation, extension, spondylodesis.

INTRODUCTION

Purpose of study: Comprehensive approach to patients with unstable C3-C7 vertebral injuries using an interbody endofixator

MATERIAL AND METHODS OF STUDY

On the basis of 25 years of clinical experience in the spinal trauma department of the Samarkand Hospital of Traumatology and Orthopaedics, the tactics for surgical treatment of non-malignant lesions of the cervical spine were developed based on a literature review. Clinical trial and treatment were observed in 55 patients, 15 of which were women and 40 - men, their ages varied from 14 to 58 years. The mean age was 34.5 years and the youth group was 21-40 years and accounted for 60%, which in turn showed a social background.

In 40% of the patients (16) the neck fracture was associated with other types of head and neck fractures, especially in 6 patients with head and neck fractures and in 4 patients with thoracic, rib and pelvis fractures. Leg and hand fractures in 3 patients, with fractures of the lumbar and thoracic spine in 3 patients. There were 26 patients who had lats, scrapes and burns.

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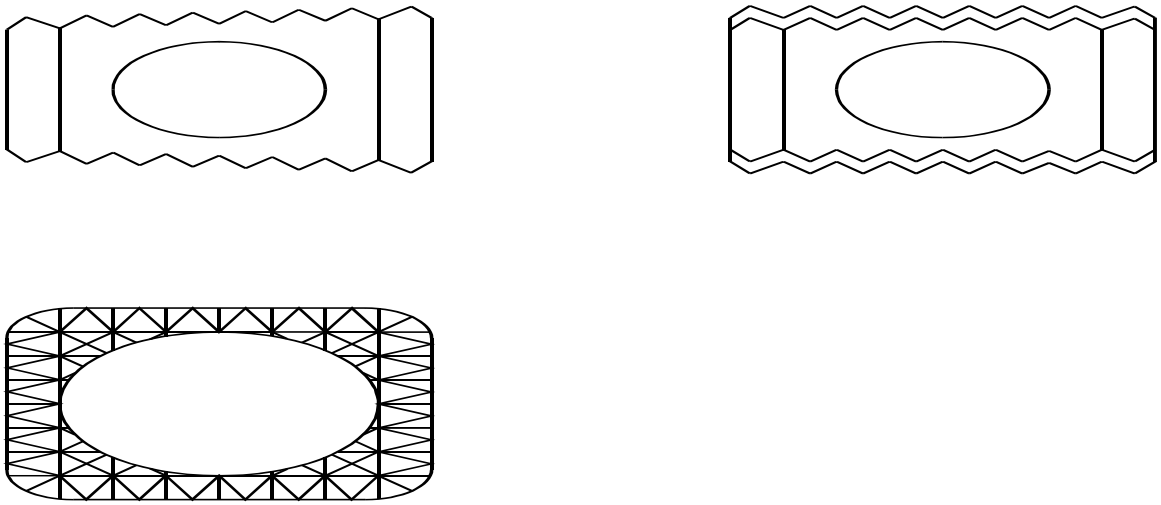

Fig.1-Drawing of the intervertebral implant schematic curvature of the vertebral bodies.

The method aims to stabilise maximal and early anatomical repair and concussion of the segments between the body using a metal endophyser. The interstitial body spondylodesis developed in the clinic, endofixation with bone autoplasty, indicates its own advantage over other popular techniques. Ligation of the ventral block in the intercostal posterior cruciate ligament during the sung treatment process, when the method is placed at the site of the spinal twitch, will stand and will not be reused. No external fixation is required once the endofixator has been placed. As a result, the patient's reaction to inpatient treatment is reduced and the recovery period is shortened. The patient returns to normal life expectancy 4-6 months after a major stroke.

The method is used for cervical spine surgeries with and without complications. No unsatisfactory results have been observed so far.

Indications and contraindications for the method

Instructions. Reviews, half reviews, crumb reviews, C3-Th1 non-removable cervical spine fractures. No.1 is shown schematically when cutting various non-sterile jars into the neck pit

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single or double loop outputs	one-sided view of the main half
	
unilateral or bilateral semi-dislocations with fractured articular tumours	
	
1/3, 1/2, 2/3, ¾ bending hollows of the articular appendages	
	
A spinal fracture that "breaks" the body	C4 occlusion, C5 traumatic spondylolisthesis of the spine
	
compression and extension of the vertebral body up to half of the outputs of the separated articular tumours	

Fig.2 Note that several intersections may be added and removed.

Instructions against. Presence of severe somatic pathology in the patient.

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TECHNOLOGY OF THE METHOD

After the patient is brought to the appointment, a clinical, radiological examination must be carried out (a radiograph and ¾ lateral head and ¾ projection, if necessary a functional X-ray should be taken beforehand). Computed tomography, MRI, is performed in order to determine the level of the patient's spinal canal and spinal cord cleft. This will determine the timing, emergency diagnostic and treatment tactics. The neck is immobilised by extending the body with a Basilewski half ring from the skull bones in unstable spinal fractures: unilateral hinge and sliding exits, unilateral hinge and sliding semi-exits, non-sliding fractures of the spinal body, exit and semi-exits.

Interpretation of the operation: the hair on the head is removed. with the patient lying on the waist, rollers are placed on the top of the chest of the neck of the head in a neutral position or a slightly bent position is ensured. The head hernia is treated with antiseptic solutions, cut symmetrically on both sides (along the axis of the spine, from the auricles, 4-5-6 cm upwards), 1.5-2.0 cm in length the skin is cut, excised, the head bone is opened under the covering. Bleeding is stopped with a tampon soaked in 3% hydrogen li pericis and stitched around the soft tissue. Ligation of the two symmetrical canals with a kegay on the external compact lamellar head of the cartridge is done in 0.4x0.4 cm. The Bazilewski ring, which corresponds to the bone canals, is fixed and secured with screws, and alcohol-furacil clasps are attached around the kegay. The head does not need to be tightened.

Dislocation of the outlet hemisphere of the neck from the thorax to the location of the spine on the Richet -computer.

Richet -computer-assisted manual dislocation: lying on the patient's back at the doctor's head, the Glisson traction is maximised by an additional strap on the doctor's waist on the patient's head, the ring traction is preferable for performing the Glisson traction, the ring traction can lead to interruption of the traction. Anaesthesia does not produce a condition or individual approach to the patient. Ululation is done in reverse jaroxat mexanismini.

Stage 1. The vertebral axis is stretched in places where the neck is in flexion of the arch.

Stage 2. The head is tilted to the side opposite the side that is put in place during the extension of the dislocated articular protuberance of the spine.

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Stage 3. The patient's head is tilted to the side where the patient's face is, causing the tumour of the upper extremity to take the place of the articular tumour of the passerine. The neck is given a state of curvature to the plinth.

Stage 4. The patient's head is moved from a bent position on the neck to a physiological position.

It is advisable to say that this procedure is done slowly and must be done taking into account the anatomy of the cervical spine, the jerohat mexanism requires great skill on the part of the doctor. In bilateral jargon, this is done alternately on the X-axis. Of course, it is better to start on the side where there is no dangling exit and fracture.

The output is done on a standard X-ray in 4-projection after being placed in the closed position. The weight of the body from the hip joint is given with an average of 3kg to 6kg of load when the flexor joints are agitated.

If the withdrawal to the closed position fails, it is carried out to place the label in a position with heavy loads. The patient is placed in the flexion position at the neck and the load on the chest of the body is increased by one hour. X-rays are checked and monitored (X-rays from the side of the head are sufficient). After the dislocation is placed on the cervical spine, the cervical sock is given a medial excision position.

If there is no possibility of putting it in place, a Richet-Composite connection under anaesthesia can be performed before the operation.

Surgery for an interstitial endophysis must be performed immediately. And such operations are performed routinely, so as not to aggravate the post-traumatic behaviour of the patient, on the 5th-7th day after the general examination.

Interpretation of the operation: placement of the endofixator and autograft into the interstitial body spondylodesis chamber. Under endotracheal anaesthesia. With the patient lying on his back in a cranial body extension position, a middle roller is placed between the shoulder blades with the head slightly tilted to the right, the skin is incised on the inside of the left head-shaking muscle, treating the operation area. The cavaatma-bottom of the skin, subcutaneous tissue, fascia, m. rlaticum is dissected. The head shake muscle is separated and pushed outwards. To say the target requires good haemostasis because the neck is very well supplied with blood. The pulsatile artery corotis communis is characterised by the slowness of the neck

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muscles, opening the anterotracheal fascia from the inside by 0.5-1 cm. (Neck organs trachea, red tenth lobes, thyroid gland, main vein and nerves) are pushed upwards and to the right, the common carotid artery-vessel and the cap extend from body S2 to body Th1 to the surface of the preceding neck. At the base it is inserted into the superior and inferior thyroid arteries, where the transverse neck vein is connected by incising small veins running through the neck vein. This manipulation does not cause complications. An X-ray is taken laterally with a marker and the Soch's jarohat is cleared again. The joxa is cut along the axis of the spine using the prevertebral fascia on the plinth and a longitudinal longitudinal electric knife in the front, the segmental vessels are coagulated. The intervertebral disc herniation is incised and completely removed with a hyaline plate in the spinal body. The fibrosis is excised in the case where the N-ring is retained in order to close the implant at the end of the operation. The attached plate in the body is cleaned with a bone spoon until the blood drops are filled, the cortical layer of the bone must be preserved. In cases of hyperextension along the axis of the cervical spine, the upper spine is defined by the caudoventral angle and the caudoventral angle of the spine. In some cases, when the vertebrae of the upper vertebrae have closed the space between the vertebrae, the angle is opened with a 1-2mm chisel. The plates attached to the vertebrae are opened.

The sledgehammer of the graft is obtained from the base of the lateral wing of the skull using a cnidrical milling machine. Depending on the size of the interstitial cavity an interstitial endograft of the correct length is selected. The autograft is placed rigidly in the endofix cavity, the autograft must protrude 0.5 mm on both sides over the teeth of the endofix to be placed in the desired position.

Neck extension along the spinal axis and hyperextension, in the case using a special instrument with an autosuyac endofixator (attachment), is placed in the intercostal socket of the spine. The endofixator must be placed between the vertebral bodies and its front part must not protrude from the plates where the vertebral body is attached. Extension of the body and spine, which are bent to the neck, is performed by an assistant. After hyperextension and axial extension are eliminated, the teeth of the endofixator enter the vertebral bodies and the endofixator is firmly seated on the plate of the vertebral body, which is bleeding. Haemostasis.

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The anterior longitudinal linclamp is placed in one or two strokes. A drainage is placed in the area where the endofixator is placed. The wound is sutured with a cavaatma pol, only m.platysma and skin tikilib is placed on the wound with an aseptic dressing. The patient is transferred to the ICU after anaesthesia in a body box. When surgical skill is higher than technical skill, the operation can last 1 hour and the patient may lose 100 ml of blood

A clinical case is presented as an example.

Patient G., 45 years old.

Diagnosis: right-sided uncomplicated S5 vertebral prolapse, half of the S6 vertebra inverted bilaterally. Fracture of S5 root of the spinal arch and swelling of the lower extremity. S5-S6 and S6-S7 are intervertebral herniations.

On 02.09.96 in the Rische-Gütter closed method, where the body weight is set by the cranial vertebrae, the S5 vertebrae failed at the half vertebrae site.

On 08.09.98, under endotracheal anaesthesia, the closed Richet-Gütter method is performed to place the S6 vertebrae on the control X-ray, where the dislocation of the vertebrae is found.

Operation: application of autografts and endophyses for S5-S6 and S6-S7 intervertebral fusion. (picture3,4,5.6,7.) After the operation the spine is fully restored.

Taking the patient after the operation, the patient needs antibiotics in combination with analgesics, inhalation with eufillin and inhalation with soda. After the incision surgery, the swelling of the neck organs, which prevents swallowing and difficulty in breathing, must be removed. On the second day the patient will have a crochet tie replaced and a plaster tie applied to the neck socket in case of ecstasy. The patient is advised to take a walk, self-maintenance.

Eight to ten days after the operation, the stitches are removed from the wound and the cervical plaster cast is restored. The patient is sent to outpatient treatment for 2 months. It should be noted that if the dorsal bones are not broken in the cervical canal and the patient is self-sufficient, a cervical rod or a Philadelphia neck brace will suffice for the neck. The average hospital stay is between 14-18 days.

Two months after the operation a follow-up X-ray will be performed and the immobilisation will be replaced. The patient will be treated as an

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outpatient for another 2 months. Four months after surgery, the issue of immobilisation is resolved. Recovery takes 1.5-2 months with a rehabilitation course (massage, therapeutic exercise). After 6 months of surgery, the jarohat returns to the ability to shake after finding the dressing with the bone block in the sock and muscle recovery. The quality of the block can be determined by functional, X-ray and motor methods.

Based on the experience of our clinic, we would not be wrong to say that this method is optimal. While we have applied this method to more than 50 patients, we have not observed a single case of spinal dislocation resection so far. Treatment of patients in hospital has been reduced to 2 marotibs. Immobilisation is facilitated and patients are much better able to restrain themselves. The case of stable fixation has shortened the recovery period to 6 months, which in turn leads to an early recovery of the patients' motor ability.

When doctors are specially trained to identify equipment and anaesthetic treatments, this method of surgical treatment can be practised in all trauma and neurosurgical hospitals.

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Figure - 3. IV dislocation of the cervical spine on X-ray

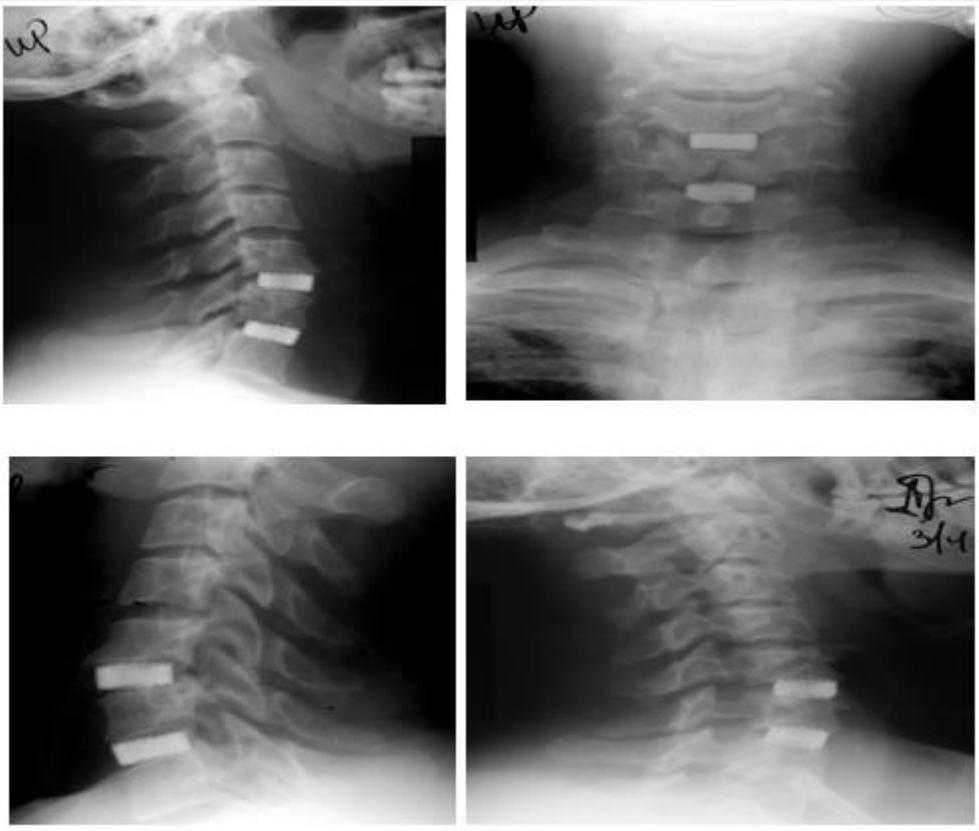

Figure - 4 case of post-operative X-ray implant fixation

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Figure - 5 Case of a patient after surgery

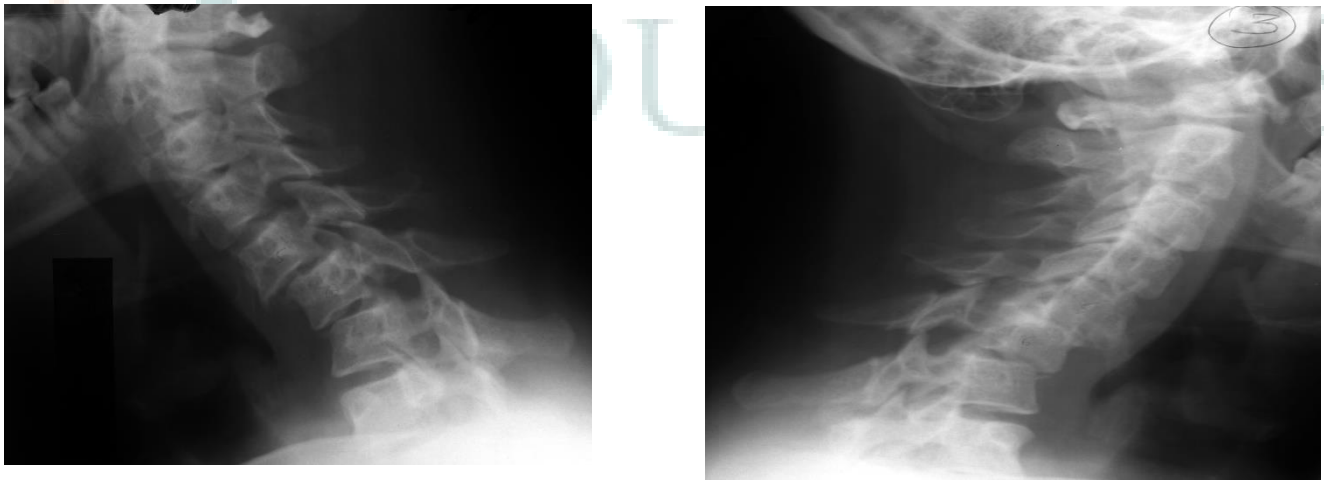

Figure - 6 Fracture and dislocation of the VI vertebra on X-ray

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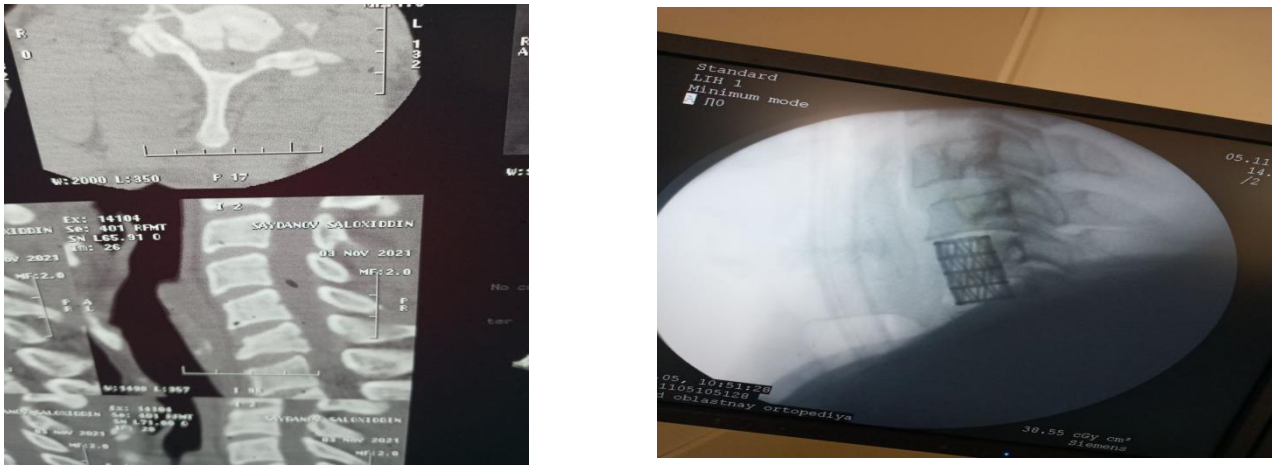

Figure - 7 Post-operative status after Interoperasin eup insertion

Figure – 8.Case of a patient after surgery

CONCLUSIONS

To summarise, S3-S7 effectiveness of surgical treatment of non-surgical vertebral fractures using a biomechanical imprint surgery plan and techniques, the use of the algorithm results in 98% restoration of cervical spine function. Based on the experience of our clinic, we would not be wrong to

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While doctors receive special training, this surgical technique can be performed in all trauma and neurosurgical hospitals when ASBS equipment and anaesthetic techniques are identified.

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