



## THE RESULTS OF THE TREATMENT OF THE TIMB BY THE BIOS METHOD

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Article history:	Abstract:
<b>Received:</b> August 1 <sup>st</sup> 2022 <b>Accepted:</b> September 1 <sup>st</sup> 2022 <b>Published:</b> October 7 <sup>th</sup> 2022	Fractures of shinbones make up 20-37.3% of all fractures, including 60% of fractures of long tubular bones. Therefore, because it is one of the problems of world scientists, BIOS treatment shows the need of the present time. The introduction of this method of treatment for shin fractures represents another step forward in medicine.

**Keywords:** Tibia, BIOS, plaster cast, tissues, plaster cast.

### INTRODUCTION.

Today, shinbone fractures account for 20-37.3% of all fractures, including 60% of long bone fractures. Currently, the treatment of fractures of the tibia is as follows: external fixation with plaster and orthoses; body drawer; external and internal osteosynthesis. In recent times, the tendency to switch to internal maloinvasive osteosyntheses is increasing. Final treatment in casts or orthoses can be performed either with casts and orthoses alone, or after treatment in body casts. Because the above methods of treatment have their own disadvantages and cause discomfort to the patient, it is necessary to treat with the BIOS method.

### LITERATURE ANALYSIS.

For the first time, the idea of blocking intermedullary osteosynthesis was given by Küncher at the German surgical congress in Munich (FRG) in 1968. He described the main principles of BIOS in his document "Intramedullary osteosynthesis in fractures and dislocations of tubular bones". The new pin he developed was the same as Küncher's standard pin, and locked the bone and pin by inserting 2 unthreaded 6.0 mm diameter bolts above and below the fracture transversely through special holes in the bone and post under the control of an electronic optical preobrazovatel (EOP). With this, he held the fracture site stably and achieved higher stability than when osteosynthesis was done with a simple pin. Küncher said that this method prevents the pin from slipping and bending, as well as rotational displacements.

German surgeons Klemm and Shellman perfected this method, that is, they created convenient pins, screws and a device for performing osteosynthesis. They recommended a convenient pin for tibial osteosynthesis, locking screws for proximal

and distal bulging fixation, and a proximal and distal guide (napravitel) device for inserting locking screws. They called this system "blocking intermedullary osteosynthesis" (1970-1980). At the traumatology clinic in Frankfurt, they have achieved excellent results by treating more than 1,500 complex dislocations with the BIOS method.

In the same period, Gross and Kempf in Strasbourg (France) developed the BIOS method and put it into practice, and achieved high results in breaking and sliding of the shin.

In 1981, this method became widespread in German and French-speaking European countries. After that, these two systems were imported to the USA and widely used across the ocean.

It was first introduced to Uzbekistan in 2008 by Professor A.M.Dursunov and N.Abdukhalikov of RITOIATM. BIOS operations have been put into practice in our hospital since 2010.

### ANALYSIS AND DISCUSSION OF RESULTS.

Fractures of shinbones make up 20-37.3% of all fractures, including 60% of fractures of long tubular bones. The current treatment of shinbone fractures is as follows:

External fixation with plaster and orthoses; body drawer; external and internal osteosynthesis. In recent times, the tendency to switch to internal maloinvasive osteosyntheses is increasing. Final treatment in casts or orthoses can be performed either with casts and orthoses alone, or after treatment in body casts.

The advantage of these methods is their low cost, lack of invasive intervention. But these methods have many disadvantages:

First - loss of movement in the joints close to the damaged segments;



Secondly, the injured leg may develop osteoporosis, joint contracture, superficial and deep vein thrombosis, and venous system failure. Long-term joint contractures can occur in 30-96% of patients when treating diaphyseal fractures of the tibia with a plaster cast;

Thirdly, when treated in a plaster bandage, it is not enough to hold the grafts in a stationary state, as a result of which, secondary displacement of grafts, slowing down of healing or failure to heal can be observed.

Permanent treatment in the body drawer is also characterized by non-invasive intervention, i.e. no direct invasion of the heart, no hematoma, no damage to periosteum and blood vessels. However, as a result of long-term bed rest, local and general hypodynamia, as well as the above-mentioned complications are observed when a plaster cast is applied.

**Table 1**

**Distribution by gender of patients treated for femur fractures in the RITOIATMSF Unit 1, Adult Acute Trauma Outcomes, 2020 and 9 months 2021**

Sex	the number	%
Women	28	36.4
Men	49	63.6
Total	77	100

As can be seen from the above table, 28 (36.4%) of 77 patients were women, and the remaining 49 (63.6%) were men.

**Table 2**

**Information on the distribution of patients by age**

By age	the number	%
18-30	21	27.2
31-49	37	48
50-60	11	14.2
61-above it	9	11.6
Total	77	100

As can be seen from the table, 21 of 77 patients were observed from 18 to 30 years old, 37 from 31 to 49 years old, 11 from 50 to 60 years old, and 9 patients from 61 years old.

In the open method - 4 remaining 73, in the closed method, 3 complications were observed: 1 had an abscess, 2 had a false joint.

Out of focus osteosynthesis currently has a 100% indication mainly in open and complicated injuries. In compression-distraction osteosyntheses, the disadvantages of this method are as follows:

Constant handling of kegai and stergins, change of dressings, weight of the apparatus, decrease in patient activity and constant discomfort and constant discomfort.

Treatment of shin fractures with an angle stabilizing plate (LCP) is also developing intensively. The advantage of this method is that it is possible to fix the fracture in anatomical reposition and stable compression. But this method also has several disadvantages: invasive intervention; great friend; separation of bone tissue over a large distance causes blood circulation in the bone. It causes additional soft tissue trauma during fixator removal. A number of complications (suppuration, thrombophlebitis, failure to complete, tissue necrosis, osteomyelitis, venous insufficiency, trophic disorders) may occur during osteosynthesis with a plate.

## CONCLUSIONS AND SUGGESTIONS.

Fractures of shinbones make up 20-37.3% of all fractures, including 60% of fractures of long tubular bones. Therefore, because it is one of the problems of world scientists, BIOS treatment shows the need of the present time. The introduction of this method of treatment for shin fractures represents another step forward in medicine. That is why plaster bandage, Ilizarov's apparatus, is more advantageous than treatment with stergin apparatus, and it requires wider implementation of this method of treatment.

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