



Municipal Enterprise «Volyn Regional Clinical Hospital»
of the Volyn Regional Council
Department of Reconstructive, Aesthetic Surgery and Hand Surgery



Experience of Ukrainian doctor in Russian-
Ukrainian war conditions

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24.02.2022
View from our
windows



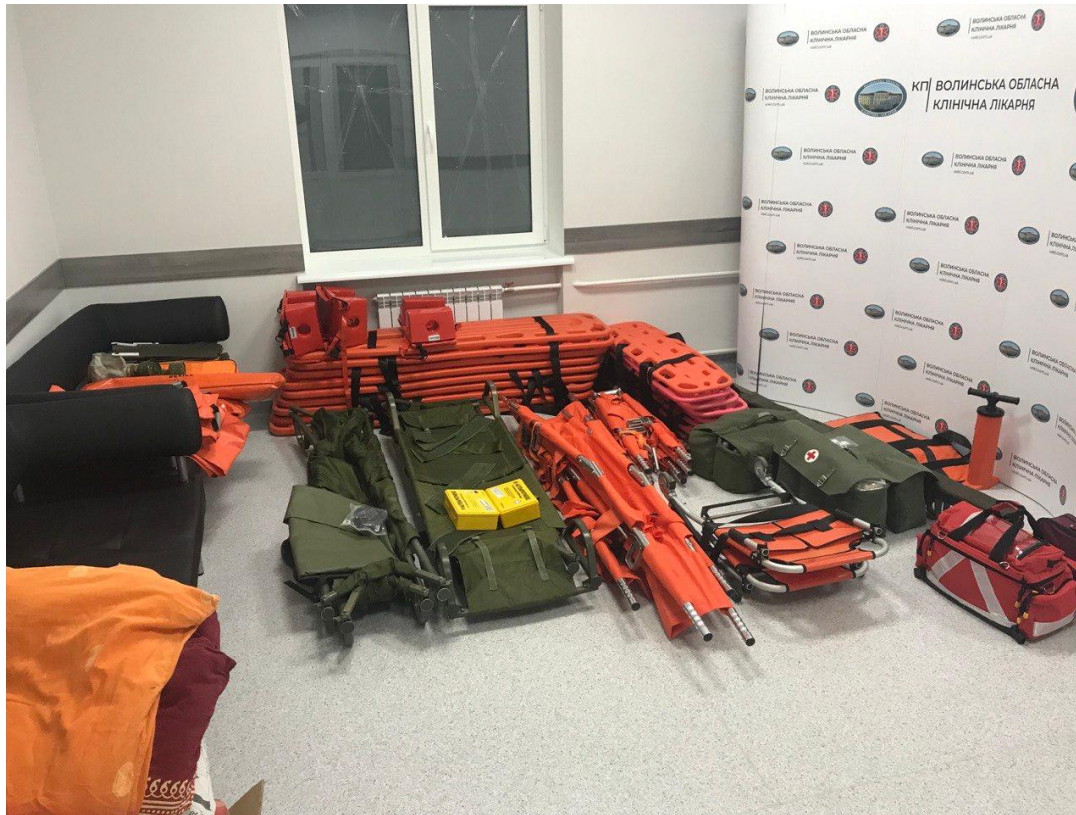
And recently



Panic and chaos all around—long queues in gas stations, in stores and pharmacies, everyone is leaving the city, and you’re getting ready and going to work, leaving your family at home



At work we discharged all stable patients to prepare beds in case of mass admissions
Management meeting to decide plan of actions and organization of working process
A lot of personnel didn't come to work, especially women with little children





In the evening, I stopped by the empty apartment for an hour. It's good that I have friends and relatives who helped evacuate my family from the city, and a few days later, abroad. I packed my things and stayed to live and work in the hospital for three weeks

Days were spent preparing and waiting for a mass casualty admission, and getting and accumulating resources (medications, dressing materials, medical supplies). There was a lot of anxiety due to the lack of practical experience in providing medical care during mass admission of patients with gunshot wounds. We did a lot of research in literature and for people who had such experience, but there were none.



Two months after the beginning of the war we received first medevac patients (because before we had the status of a frontline hospital awaiting an offensive from Belarus, the wounded were not directed to us).

Now we remain at Role 4 — the stage where second-look surgeries, reconstruction, and rehabilitation are performed.

In the first months of the war we received evacuation trains 2–3 times per week, about 200–250 wounded each time, including civilians.



We held all-hospital rounds twice a week with a doctor (supervisor) from the military hospital to decide further treatment strategy and patient rerouting. We triaged patients — those who could be treated in smaller hospitals were transferred to the next stage due to limitations in beds and resources. We prepared beds for the next evacuation and for local civilians because of constant shelling and the risk of mass casualties. Patients who received highly specialized care were also transferred to smaller hospitals for further care.



This is how situation looked from the perspective of the Chief of the Emergency Department. Since in military medicine the Chief of the Emergency Department in military hospital is responsible for receiving patients and their further transfer/evacuation, we adopted the same model.

I was present at all medevac admissions and hospital rounds together with the Surgical Medical Director and a supervisor of the military hospital. The working day usually started at 6:30 a.m., with no days off or vacation for two years.



In July 2022, things became a bit easier, yet at the same time more anxious — my family returned from Germany, as my wife and children wanted to be together again. Although they were very afraid, my older son said, ‘Nuclear missiles could fall there, but I want to be with my dad.’

Perspective of medical personnel in general

A significant increase in patient flow — wounded military, internally displaced persons (IDPs) and civilians. Soldier in Ukraine statistically fall into the category of men aged 40+, which affects the course of diseases, the postoperative period, wound healing and rehabilitation.

At the beginning of the war, soldiers were admitted only with combat injuries. As the war continues, now the amount of soldiers with diseases, including chronic conditions, as well as long-term consequences of injuries, have been increasingly admitted.



- 16–24 hour shifts
- No work-life boundaries
- Constant availability
- A big problem of work organization for families with children, there both parents work in critical fields
- Burnout from overworking and constant psychological pressure
- Chronic stress
- Emotional exhaustion
- Responsibility for lives

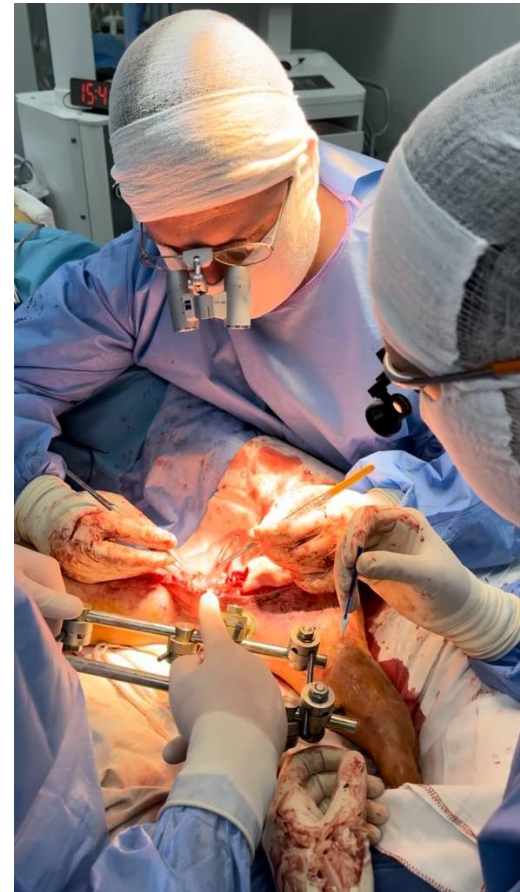
Perspective of a surgeon

- Lack of experience and skills in treating such injuries and trauma.
- Severe shortage of resources and lack of essential supplies (specialized instruments, equipment, consumables and medical devices)

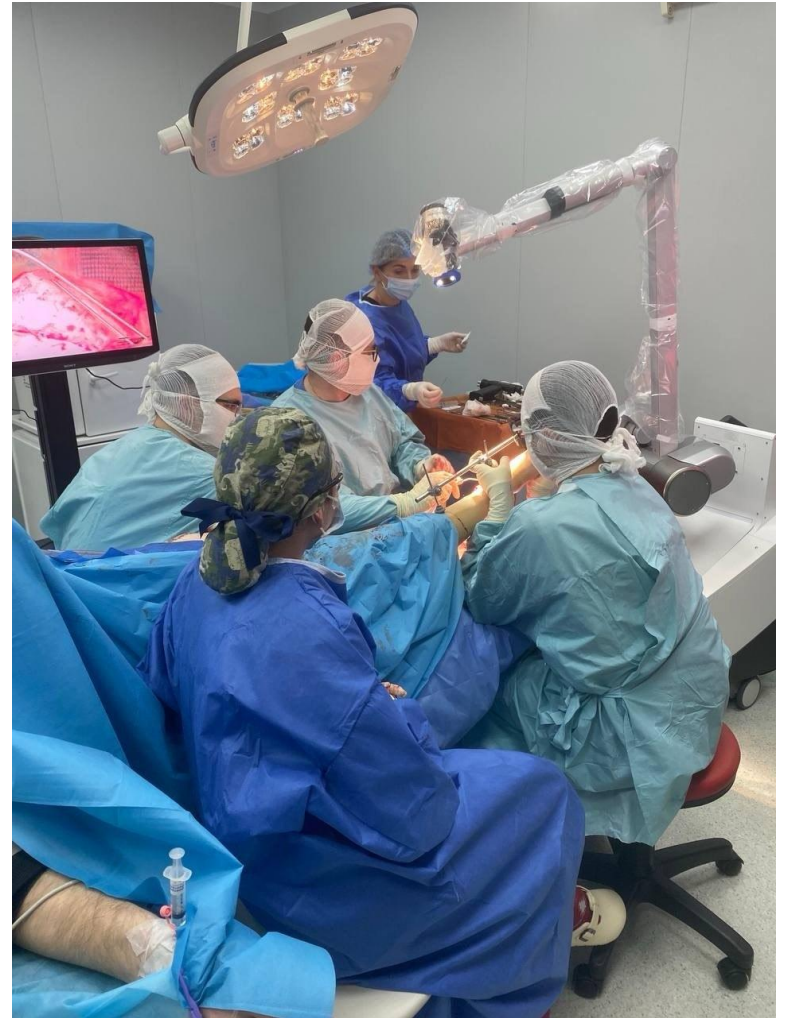


We began our journey in reconstructive surgery with local rotational flaps and skin grafts, and continued with free flaps under 2.5–3.5× binocular magnification.

There are many young men and women among the military personnel, and in our opinion every preserved functional limb is always far better than a functional external prosthesis — even if it requires significantly more time and resources.



Currently, we are using a borrowed from neurosurgery exoscope for free flap surgeries





Clinical Case 1

- 34 y.o. patient
- Blast injury
- Multiple surgeries
- Free flap reconstruction

Appearance on admission to the clinic
9th day after injury



1.5 month after injury
Free radial artery flap
Venous congestion
Flap failure on 8th day



First stage of Italian reconstruction



Bone defect grafting using autograft from the iliac crest with bioglass 5 months after injury



3 months after bone grafting



16 months after injury





Clinical Case 2

- 34 y.o. patient
- Blast injury
- Multiple surgeries
- Free flap reconstruction

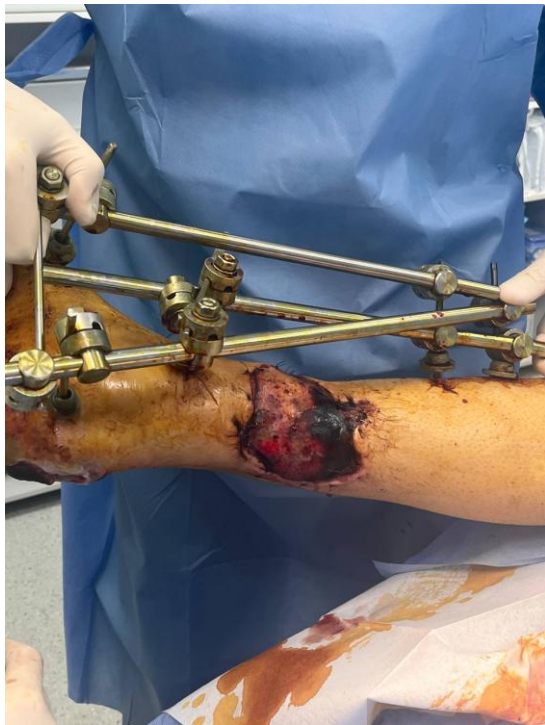


Appearance on admission to the clinic.
4 days after injury



Secondary surgical debridement of the right lower-leg wound. Placement of a cement spacer.
Reconstruction of the right lower-leg defect using a supramalleolar pedicled flap and a split-thickness skin graft (14 March 2025).
Two weeks in the department.



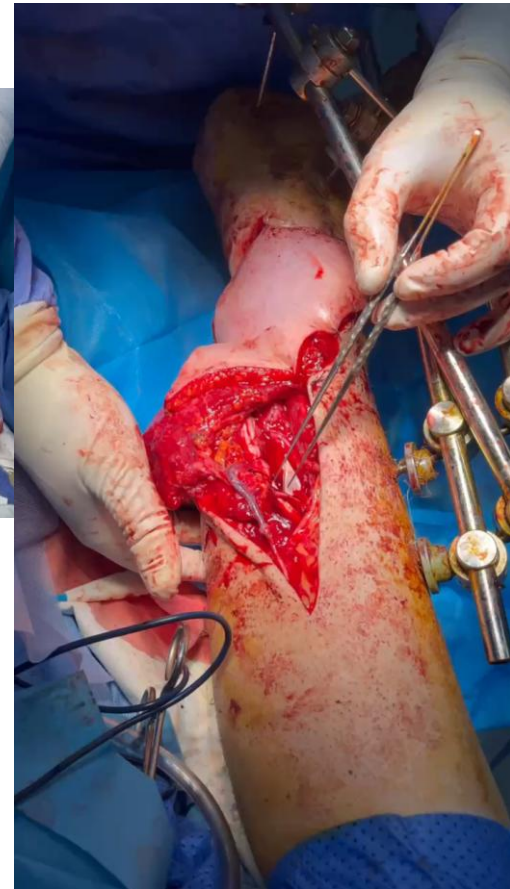
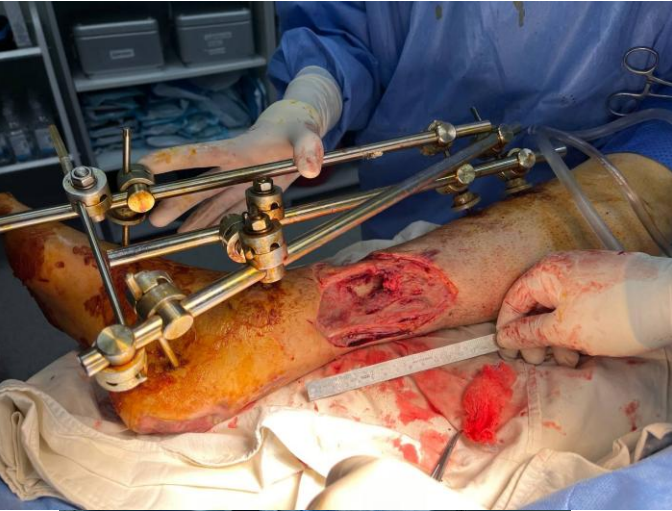


Postoperative day 7.

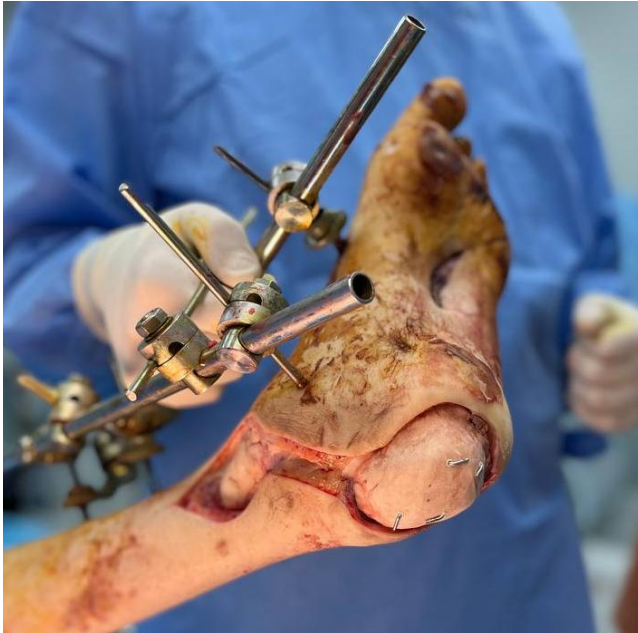
The postoperative course was complicated by venous congestion and partial flap necrosis (21.03).

Appearance of soft tissues after staged debridements.

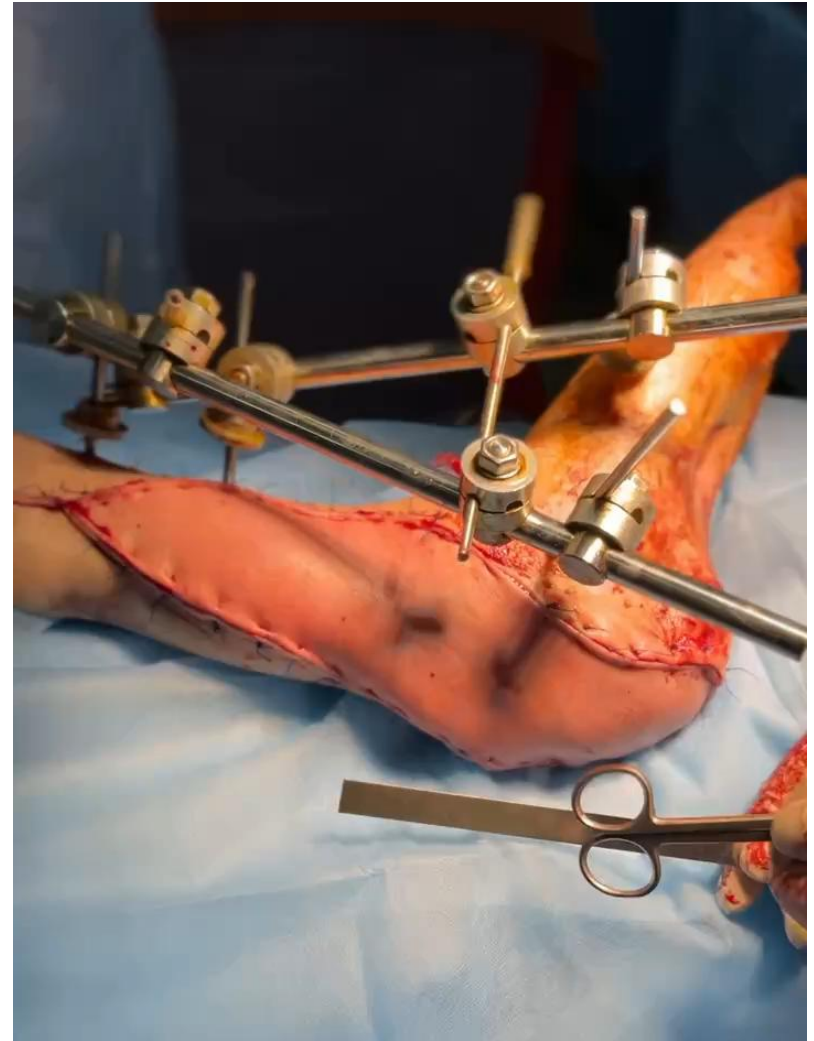
2 months post-injury (14.04).



Debridement of the right lower leg wound. Placement of a cement spacer. Reconstruction of the soft tissue defect of the right lower leg with a microvascular LD flap, connected end-to-end to the stump of the posterior tibial artery of the left lower leg. Coverage with a split-thickness autologous skin graft (14.05.2025);
3 months after injury.



Debridement of the left lower leg and left foot wounds. Placement of a cement spacer in the area of the tibial and calcaneal bone defects. Reconstruction of the soft tissue defect with a microvascular LD flap, connected to the stump of the posterior tibial artery of the left lower leg (03.07.2025).





The following day, flap revision was performed.
Findings: thrombosis of the venous anastomosis.
A venous anastomosis was performed using a
venous autograft from the saphenous vein.
Appearance of the flap after revision.



Day 4 after flap revision.



3 weeks after flap revision.



1 month after revision.



Residual calcaneal defect
after necrectomy.
1.5 months after revision.



Replacement of the cement spacer. Reassembly of the external fixation device. First stage of Italian reconstruction of the soft tissue defect of the left heel using a free random flap from the posterior surface of the upper third of the right lower leg. Coverage with a split-thickness autologous skin graft(20.08.2025).
Postoperative day 1.



Postoperative day 21.



5 days after the second stage of the Italian flap procedure.



Donor site 4 months after cross-flap surgery



13 months after injury

The nature of injuries has significantly changed — during the first two years of the war there were many military casualties with blast injuries from mortars, artillery, and aerial bombardments from helicopters and aircraft.

Now, about 90% of injuries are caused by FPV drones. The number of wounded has decreased, possibly because those with severe and extremely severe injuries cannot be evacuated alive from the kill zone. The injuries have become more targeted but also more debilitating, affecting body areas not protected by armor.

Drone-related injuries may not appear to cause massive defects, but they are complex, require plastic surgery, and take soldiers out of action for a long time, if not permanently.



Our experience is growing and treatment outcomes are improving. At the same time, we do not want to create the impression that we are able to save every limb — there are cases where amputation is the only option for achieving the best possible functional recovery.



For maximal treatment success, it is crucial to have not only the efforts of medical personnel, but also the patient's contribution — their motivation to recover, compliance, quitting smoking, comorbidities, and age all play an important role. Despite time constraints, we strive for maximum exchange of experience and acquisition of practical skills, as this is critically important in microsurgery. Regular training is also essential, as well as the availability of treatment protocols, consumables, and specialized instruments.



Thank you for this opportunity to share our experience.
Welcome to Ukraine!

