

# EWMA 2024 CONFERENCE ABSTRACTS

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**Conclusion:** Those living in earthquake-prone areas should be advised to take the necessary precautions to prevent their stoves from tipping over, not to keep children around when heating water on the stove, or to use alternative heating methods instead of the stove. In addition, earthquake victims should be transferred to appropriate centers urgently.

### EP385 The effect of arginine-carnitine drug and ulinastatin drug on the parameters of endothelial dysfunction and inflammatory process in patients with burns

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**Introduction:** Thermal injury disrupts immune system homeostasis, causing cytokine release, systemic inflammatory response syndrome, dystrophic processes, and dysfunction in organs and systems. Systemic damage to the vascular endothelium is a key mechanism in disorder development, with endothelial dysfunction contributing substantially to burn wound healing pathogenesis, serving as a potential target for therapeutic intervention.

**Aim:** to study the combined effects of the arginine-carnitine drug (CACD) and ulinastatin drug (UD) on immunological parameters and indicators of endothelial dysfunction and inflammation in burn patients.

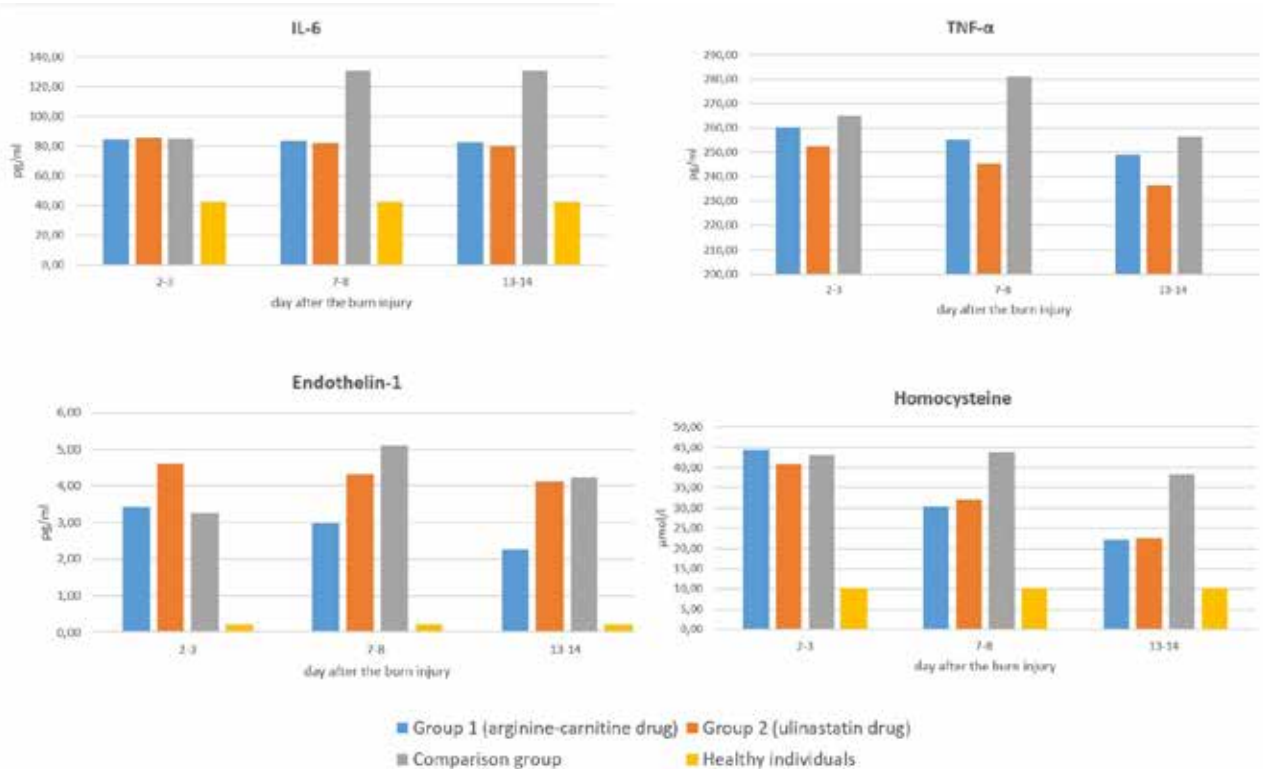
**Method:** The study spanned the acute period: days 2-3, 7-8, and 13-14. CACD (Group 1) was administered intravenously from days 2-3 post-burn for 5 days, 100 ml once daily. UD (Group 2) was administered from days 2-3 post-burn, 100,000 IU twice daily for 5 days. IL-6, TNF- $\alpha$ , endothelin-1, and homocysteine levels in blood and wounds were examined.

**Results/Discussion:** Results are presented in Table 1 and Pic. 1.

When using CACD and UD, IL-6 levels remain stable, while TNF- $\alpha$  exhibits a tendency to decrease, contrasting the comparison group where both increase relative to baseline. Endothelin-1 significantly decreases in both groups, especially in Group 1, while the comparison group shows an increase. Homocysteine significantly decreases in both CACD and UD groups compared to the comparison group.

Table 1.

Indicators	Group 1 n=23			Group 2 n=12			Comparison group n=22			Healthy individuals, n=20
	day after the burn injury									
	2-3	7-8	13-14	2-3	7-8	13-14	2-3	7-8	13-14	
IL-6, pg/ml	84,88 ±3,41	83,65 ±1,58	82,31 ±1,35	85,75 ±2,26	82,08 ±3,12	79,9 ±3,07	85,30 ±13,10	131,0 ±11,2	131,2 ±9,25	42,7 ±6,5
TNF- $\alpha$ , pg/ml	260,24 ±6,98	255,35 ±6,19	248,88 ±8,19	252,58 ±11,97	245,33 ±10,36	236,60 ±8,78	265,0 ±11,55	281,2 ± 14,67	256,35 ±15,70	24,2 ±6,0
Endothelin-1, pg/ml	3,43 ±0,56	2,97 ±0,56	2,27 ±0,46	4,62 ±0,22	4,30 ±0,34	4,13 ±0,33	3,25 ±0,37	5,09 ±0,36	4,23 ±0,42	0,22 ±0,9
Homo- cysteine (wound blood), $\mu$ mol/l	44,36 ±4,89	30,29 ±6,70	22,22 ±3,46	40,82 ±3,89	32,15 ±4,91	22,58 ±2,41	42,9 ±0,85	43,95 ±1,36	38,2 ±2,4	10,2 ±0,5



Pic. 1

**Conclusion:** Our research demonstrates that CACD and UD impact IL-6, TNF- $\alpha$ , endothelin-1, and homocysteine levels in burn patients' blood. These findings suggest the potential effectiveness of both drugs in reducing immunological disorders, inflammation and endothelial dysfunction, potentially crucial in enhancing burn healing processes.

## EP386 Surgical treatment of large partial thickness burns

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**Introduction:** Restoration of the epithelium occurs from skin appendages in IIA degree burns, but part of them is involved in the paranecrotic zone.

**Aim:** To evaluate the effectiveness of a surgical program for the treatment of partial-thickness burns.

**Method:** 45 patients were under observation in the Kyiv burn center during 2021-2022, 28 patients with partial burns greater than 40% TBSA, and 17 patients with limited deep and widespread superficial skin burns.

**Results/Discussion:** Ultrathin excision of superficial necrotic tissue was performed in 15 patients of the main group 36.4 $\pm$ 6.4 hours after injury, the wounds were covered with a xenograft. Partial excision was not accompanied by blood loss. Epithelization occurred within 19.5 $\pm$ 3.5 days. Gradual exfoliation of necrotic tissues occurred using silver sulfadiazine or hydrocolloid coatings in 13 patients of the comparison group which was accompanied by endogenous intoxication and SIRS. Epithelization occurred 20.1 $\pm$ 3.2 days.

In patients with superficial skin burns in combination with a limited deep area at the first stage in 36.4  $\pm$  6.4 hours after injury, a very thin excision superficial necrotic tissue was performed. The wounds were covered with xenograft. In the