

**RATIONAL BASE OF A COMBINATION GENTAMICIN 0.1% -
UREA 0.2% IN OINTMENT FORM DURING THE TREAT-
MENT OF PATIENTS WITH SKIN BURNS**

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Combined preparations containing as a principal component urea (generic name carbamide) with a chemotherapeutic drug, respectively a pharmacological agent, are still in an initial research phase. In historical aspect, to the best of our knowledge from the literature available there is no data about a preparation containing a combination of urea and antibiotics including aminoglycosides (1-3,5). Under sale is only Nifucin-gel (Germany), a combination of urea 5% and nitrofurazon 0.2% (5). According to our pharmacological and microbiological investigations, MIC of Gentamicin (128 µg/ml) decreases almost thrice in 31 out of 33 strains of Klebsiella, Proteus, Citrobacter and E. coli. So we proposed a gentamicin 0.1% - urea 0.2% combination to be prepared for further research in ointment form (4,6-7). The aim of this work is: 1) to compare its clinical antibacterial effects as judged by the isolated bacterial strains before and during the treatment with our previous data from in vitro studies; and 2) to collect an information on the tolerability, i.e. on possible side effects. We studied 10 patients aged 6-83 years with skin burns of III-A degree, 5 of which were outpatients (table 1).

The ointment was spread in a thin (1-2 mm) layer and covered by a sterile bandage renewed every 48h. (4,7). The microbial flora was isolated before and after the 48th h and the 96th h from the beginning of the treatment with the ointment mentioned above. In 90% of the patients treated the initially isolated bacteria were not found after the first 4 therapeutic days. The flora detected included: 3 patients with Staph. aureus, 2 with E. coli, 4 with Proteus and 1 with Enterobacter. In one patient only there was no sterile result on the 96th h. These results are in good agreement with our previous in vitro data, according to which this combination reduces Gentamicin MIC values by 300% in 8 strains of Proteus and by 218% in 11 strains of E.coli (4,6,7). As for the tolerability of the ointment form of this com-

bination, no side effects were clinically registered.

Table 1

Isolated bacteria before and during the treatment with the combination of Gentamycin 0.1%-Urea 0.2% in ointment form

Initials, age and sex	Area of skin treated	Microbial testing			Record of disease
		before treat- ment	at 48 th h after treatment	at 96 th h	
1.EMY 68 f L/R	Hands, foot	Proteus	Proteus	Staph. aureus	6959
2.DSG 83 f	Gluteal, thighs	Proteus	Proteus	None	6822
3.TDG 76 m	Feet	Proteus	Staph aureus	None	7041
4.TAJ 77 m	Feet	Staph. aureus	Staph. aureus	None	6642
5.IGP 31 m	Face, forearm	Staph. aureus	Proteus	None	6874
6.DDI 32 f	Feet	Entero- bacter	Entero- bacter	None	ambula- tory
7.ZGZ 43 m	Feet	Proteus	Staph. aureus	None	ambula- tory
8.OJM 6 m	Forethighs, thighs	Staph. aureus	Staph. aureus	None	ambula- tory
9.AIG 39 f	Hands	E.coli	Staph. aureus	None	ambula- tory
10.VID 28 f	Thighs	E.coli	Staph. aureus	None	ambula- tory

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