



EARLY REHABILITATION OF THE PATIENTS WITH INJURIES CAUSED BY ANTIPERSONNEL MINES

Djurovic A., Ph.D, assistant professor

**CLINIC FOR PHYSICAL MEDICINE AND REHABILITATION
MILITARY MEDICAL ACADEMY BELGRADE
SERBIA AND MONTENEGRO
2004.**



Antipersonnel mines are used for destruction and ruining the enemy's military force.

Each year mines cripple or kill nearly 26.000 persons, making mines the largest world's cause of war injuries.

Mines are primarily designed to cripple and not to kill, because injuries dictate intensive treatment and cause negative psychological effects on other soldiers.

What are the experiences of MMA in the rehabilitation of patients with injuries from antipersonnel mines?



METHODS:

retrospective clinical study

GOALS:

- to collect data on the degree of injuries by explosive devices, and especially by antipersonnel mines
- to show the effects of the early rehabilitation treatment of these patients.

METHODS OF THE OBSERVATION:

- range of motion and muscle strength as a condition for activities of the daily life;
- range of motion measured by goniometer,
- muscle strength estimated by MMT.

STATISTICAL ASSESMENT:

- proportional test
- Student t-test



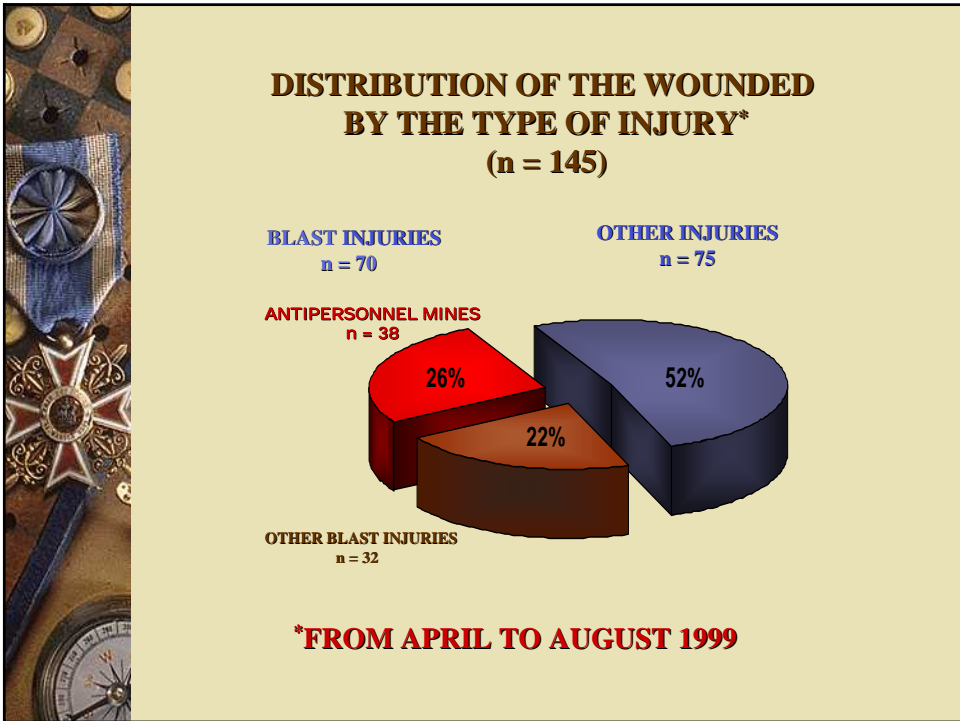
THE ESSENCE OF THE EARLY REHABILITATION

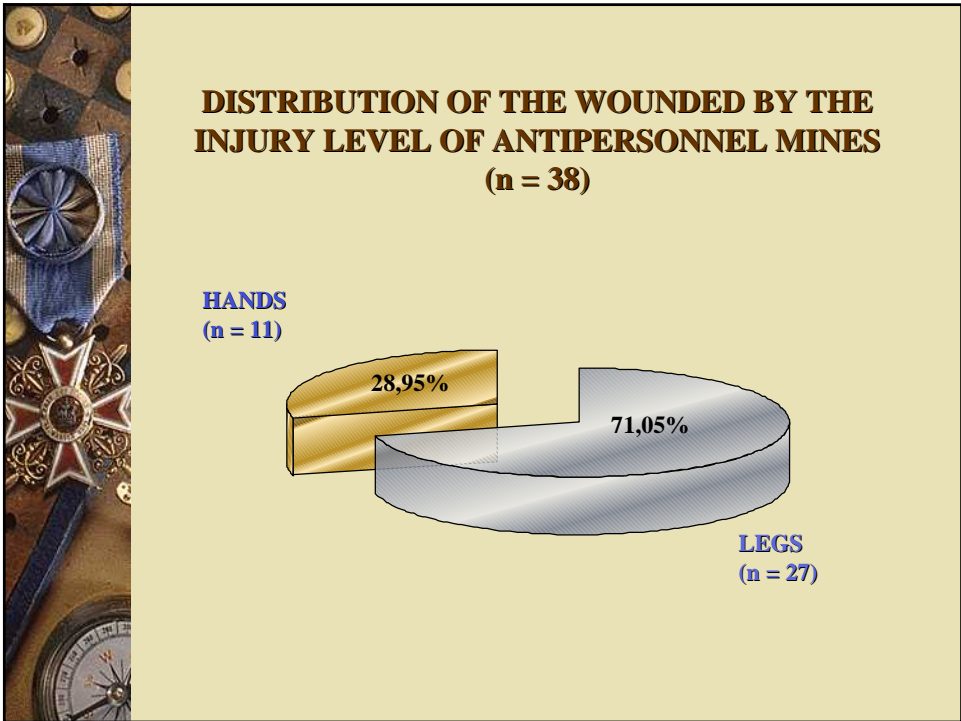
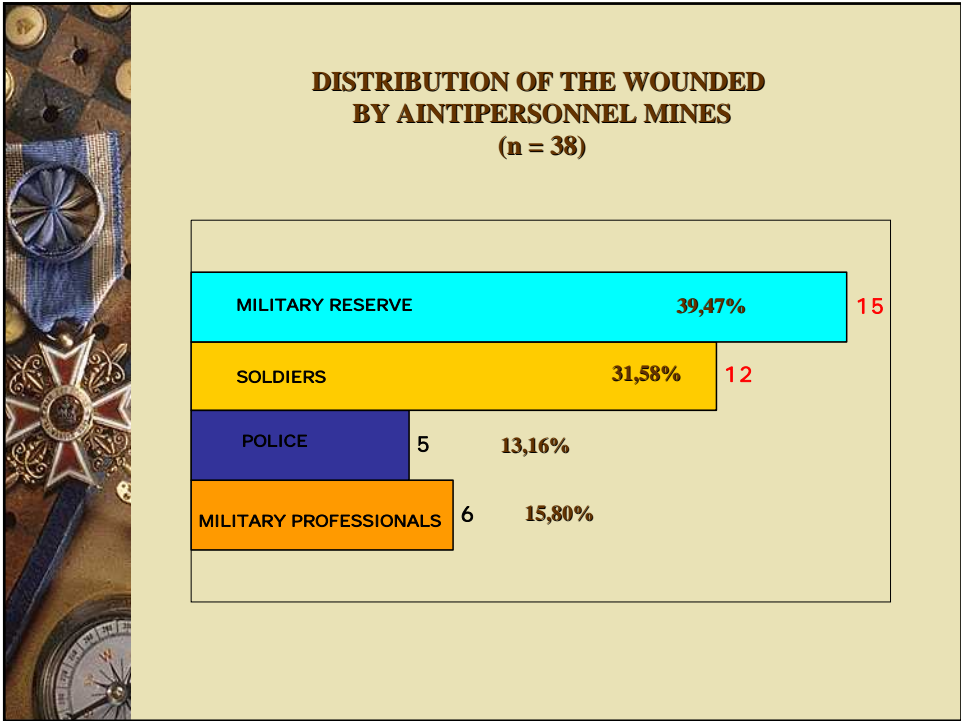
GOALS:

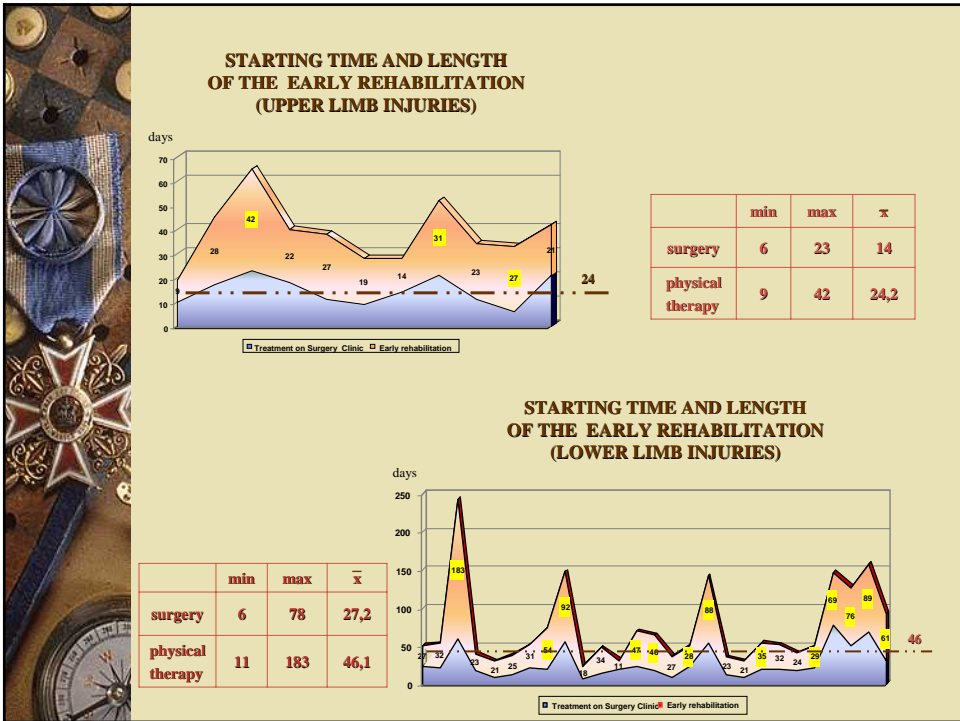
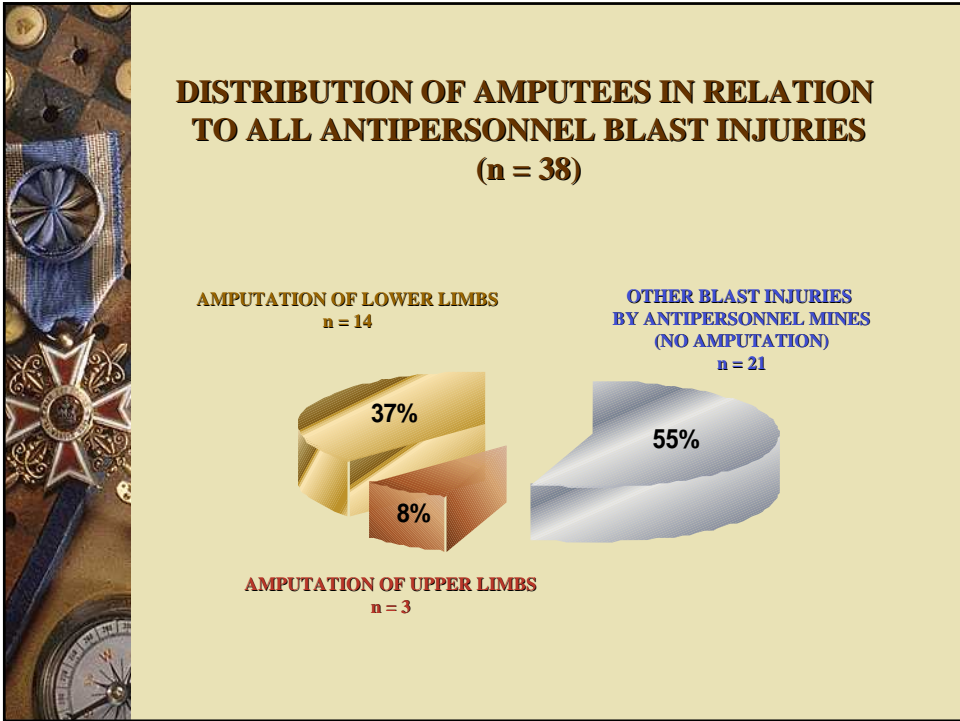
1. Pain control
2. Maintenance of movability and muscular strength
3. Prevention and healing of the complications
 - thromboembolic complications
 - bronchopneumony
 - contracture and muscular atrophy
 - anxious and depressive reactions
4. Preparation of the stump for prosthetics
5. Training for ADL

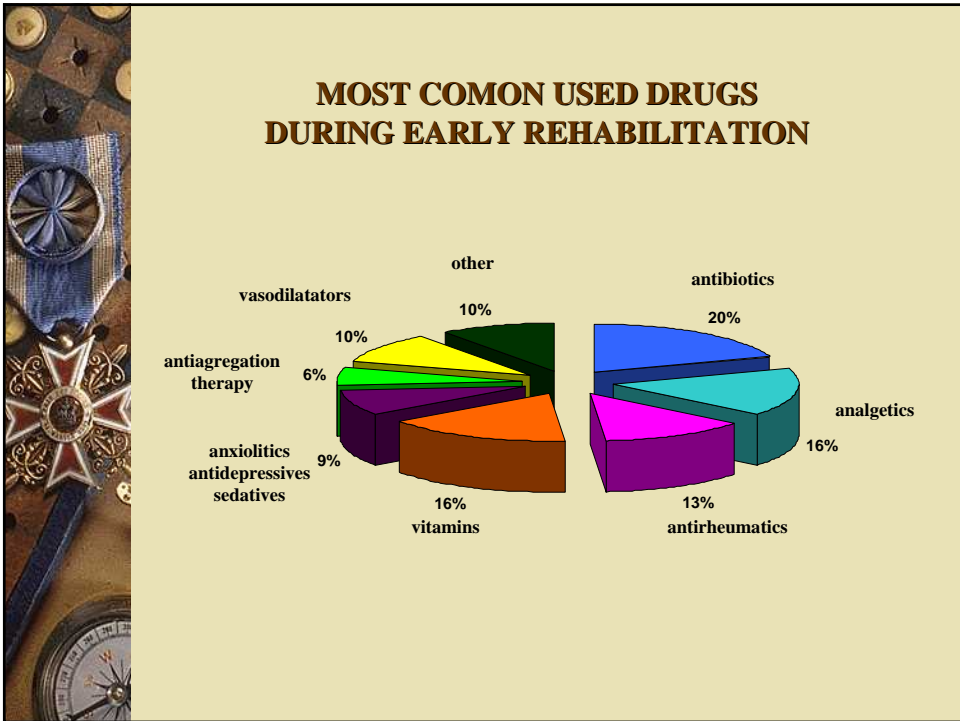
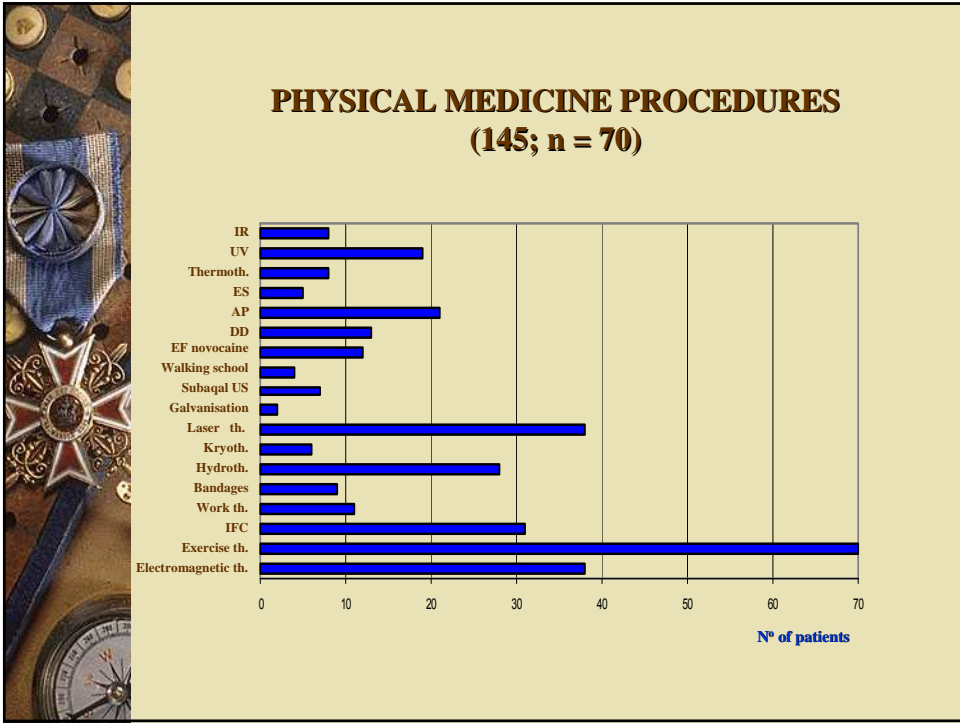
METHODS:

1. Medicaments
2. Physical therapy
3. Group psychotherapy



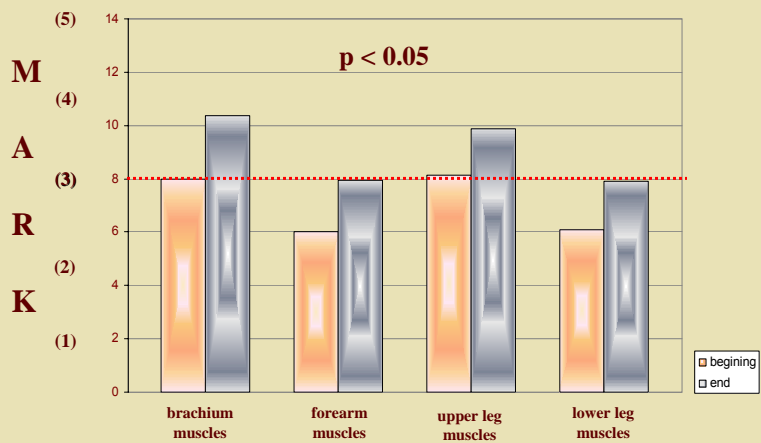


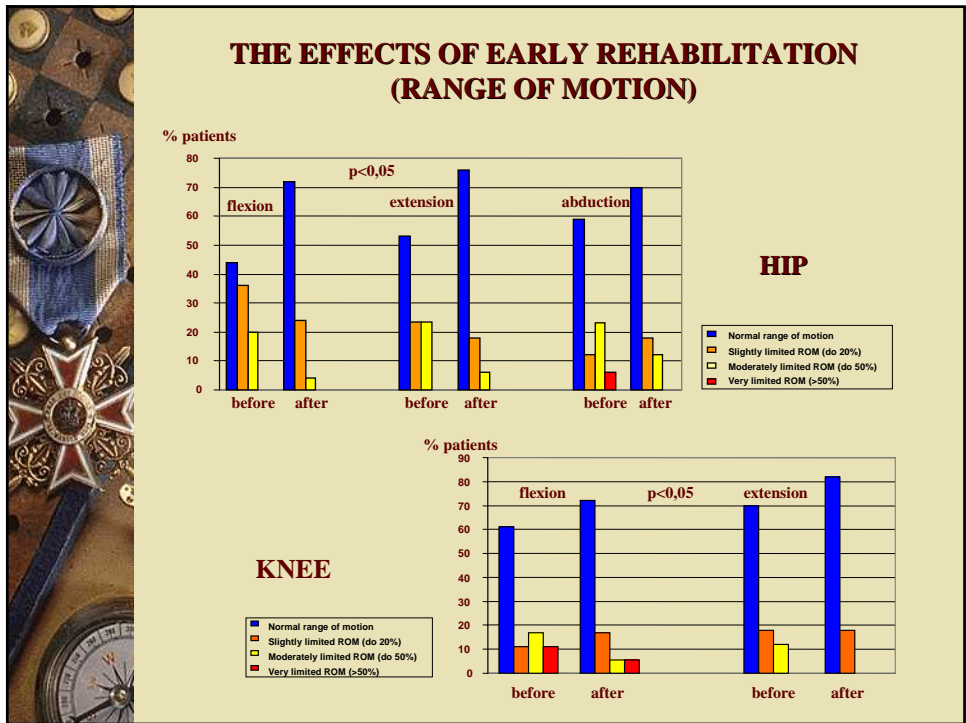
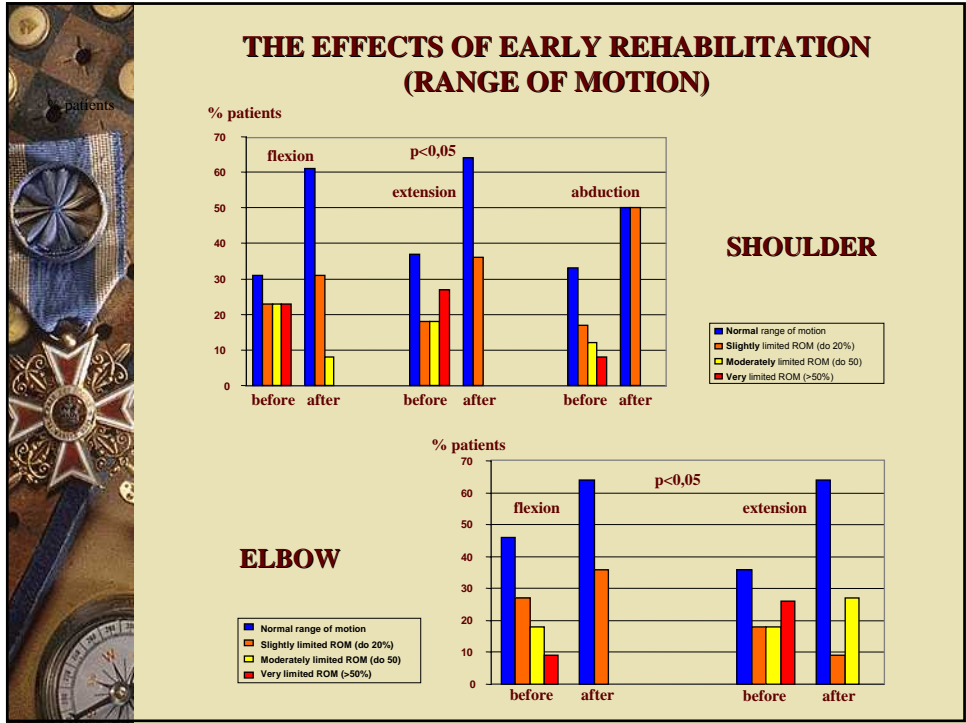






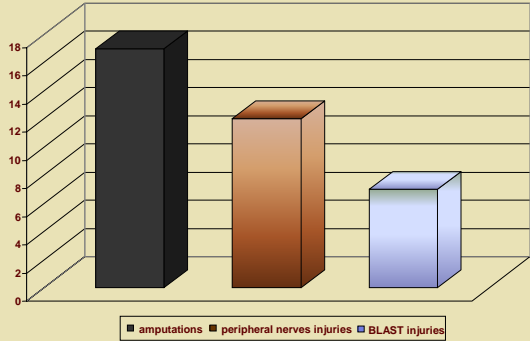
THE EFFECTS OF EARLY REHABILITATION (MANUAL MUSCLE TEST)







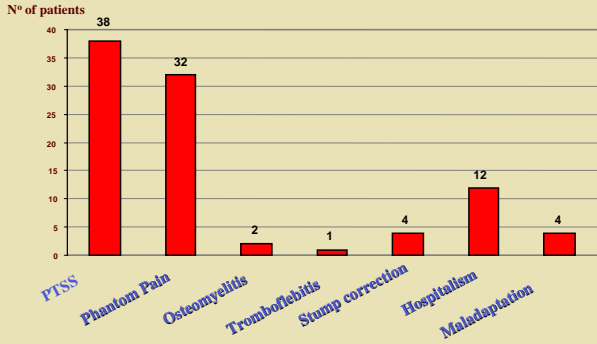
COMPLICATIONS OF THE INJURIES CAUSED BY ANTIPERSONNEL MINES (n = 38)




1. Amputations of the limbs 44,73% (n = 17)
2. Injuries of the peripheral nerves 31,57% (n = 12)
3. Blast syndrome 18,42% (n = 7)



COMPLICATIONS DURING THE TREATMENT AND REHABILITATION OF THE WOUNDED BY ANTIPERSONNEL MINES (n = 38)



1. PTSS 100% (n = 38)
2. Phantom Pain 84,21% (n = 32)
3. Osteomyelitis 5,26% (n = 2)
4. Tromboflebitis 2,63% (n = 1)
5. Stump correction 10,53% (n = 4)
6. Hospitalism 31,58% (n = 12)
7. Maladaptation 10,53% (n = 4)



**COMPLICATIONS OF
THE REHABILITATION TREATMENT**
(n = 38)

NOT RECORDED!





CONCLUSIONS

1. During the war conflict 1999, at the Clinic for for FMR of MMA we have treated 145 injured patients, of which 38 (26%) were injured by antipersonnel mines.
2. Average age of the patients was 27,4 years.
3. Most patients were from the groups of military reserve and soldiers. The least were from the group of military professionals (officers).
4. Due to the degree of the injury, and because the required treatment was not prompt, the amputation of the limbs was performed at 17 (45%) patients.
5. Besides this, most of the patients had other injuries (more than 50%), and therefore the time of the hospitalization was extended (the average hospitalization length was 43 days).
6. The effects we have achieved were satisfactory. But, we have found that there are still more possibilities of improving them furdur!



SPECIAL NEEDS FOR PERSONS SUFFERED FROM ANTIPERSONELL MINES

MEDICAL NEEDS

- for prolonged rehabilitation
- for medical treatment of associated illness (hypertension, diabetes, depression etc.)

SOCIAL NEEDS

- for adaptation of the house
- for adaptation of the car
- for maintenance of the prosthesis

PROFESSIONAL NEEDS

- professional orientation (especially for military professionals)



OTHER NEEDS

(for hospitals, rehabilitation centers and medical professionals)

Besides MMA, there were a few of hospitals (Nis, Kraljevo, Kragujevac etc.) which were involved in providing care for the patients injured by antipersonnel mines, as well as the other wounded persons.

Unfortunately, there is no precise statistics about the number of wounded persons, nor about severity of their injuries.

Therefore besides our need for purchasing some medical equipment, there is also need for education of our physicians in some of representative hospitals or medical centers for rehabilitation, as well as for PC equipment, both hardware and software.