

Spectrum of infections in physiotherapy and rehabilitation ward for war victims and veterans from Iraq and Syria (short note)

I. Khaled (Ibrahim Khaled)², P. Ali Hajj (Peri Ali Hajj)^{1,2,3}, V. Krcmery (Vladimir Krcmery)^{1,2}, D. Kalatova (Dagmar Kalatova)^{1,4}, A. Gallova (Andrea Gallova)³, T. Bak (Tadeusz Bak)³, I. Schumann (Ingrid Schumann)³, Z. Dudova (Zuzana Dudova)^{1,2,3}, K. Zoller (Katarina Zoller)^{1,2,3}, B. Reith (Bruce Reith)³, M. Obtulovic (Miroslav Obtulovic)³, M. Olah (Michal Olah)^{3,6}, T. Hrindova (Tatiana Hrindova)³, M. Belovicova (Maria Belovicova)³

Original Article

¹ UNHCR Refugee camp Veria, Greece

² UNHCR Refugee camp, Alexandria, Greece

³ PhD and MSc program of St. Elisabeth University, Slovakia

⁴ Jan Neumann Institute of St. Elisabeth University, Pribram, Czech Republic

⁵ University Hospital Trencin, Slovakia

⁶ University of Social and Administrative Affairs, Vitezslava Nezvala 801/1, 736 01 Havirov, Czech Republic

E-mail address:

michalolah@gmail.com

Reprint address:

Michal Olah

St. Elisabeth University of Health and Social Sciences

Nam. 1. Maja 1

Bratislava, Slovakia

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Johnson Nzau Mavole

Catholic university of Eastern Africa, Nairobi, Kenya

Vitalis Okoth Otero

Catholic university of Eastern Africa, Nairobi, Kenya

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Abstract:

Spectrum of infectious diseases in Physiotherapy and Rehabilitation Ward of Military Hospital in Iraq sponsored by the German Armed Forces is analyzed. In contrast to usual bacterial flora in non-war zones gram negative bacteria from external sources during blast injuries were found, including *Acinetobacter baumannii*, *Pseudomonas putida*, *Enterobacteriaceae* and *Flavobacteria*.

Conflict of interest:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Introduction

Rehabilitation and physiotherapy wards for either civilian or veterans are integral parts of all field and military hospitals since war in Afghanistan in 2001 and after that in all conflicts in Middle East (Iraq 2003, Lybia 2009, Syria 2011). (1-5) The aim of this study was to compare etiology of infections in patients recovering in this kind of wards for limb injuries or prosthesis after war related injuries in 2016-2017. (6-10) Other aim was to assess the proportion of MRSA versus other organisms among isolates in 2016-2017 in a Greek clinic for war victims from Syria and Iraq.

Patients and methods

In total, 197 patients were admitted for rehabilitation with new prosthesis received from international humanitarian organisations in 2016 in a Greek Military Facility in UNHCR camp Veria, Greece. Type of patient, injury and etiology of infection was

recorded. Medical data were then compared and analysed. Among other data, sociodemographic data on post-war victims were collected as well.

Results and discussion

Majority of patients (167 out of 197) were victims of war injury – traumatic amputation of leg or arm with prosthesis replacement. Infections were mainly due to postoperative complications (wounds). Out of 167 traumatic limb amputations were 37 upper limb and 130 lower limb. Other 20 amputations were caused by infected burns or other causes (9). One patient was lost to follow-up. Post-operative wound infection was present in 130 cases, other 11 patients already came with infected injury. Skin and soft tissue infection not related to operation was present in 51 cases. Healthcare infrastructure after exodus in 2015/2016 in all Balkan countries

is not sufficient to cover medical and social pathology (1-5). MRSA is usually referred as a commonest pathogen, following by non-fermenting GNB (6-10).

Table 1: Etiology of infections among 197 war victims in field hospital in Iraq

Non-fermenting GNB	31
Pseudomonadaceae (NonA)	16
Acinetobacter spp.	20
Enterobacteriaceae	18
S. aureus	15
S. pyogenes	10
Other	7
Unknown	50

Conclusions

Spectrum and etiology of infections in patients with war related traumatic injuries is different than in patients from EU. Instead of MRSA and S.pyogenes, Gram-negative bacteria, such as Pseudomonas species, Acinetobacter and Enterobacteriaceae are prevalent. Low prevalence of MRSA could be explained by extraordinary and different causes of injuries (post-war trauma and physiotherapy) in contrast to non-war related injuries (car accidents, sports, incidental injuries).

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