

Non-invasive ventilation in community acquired pneumonia



We have greatly enjoyed reading the recently published article by Al-Rajhi et al. [1]. This retrospective cohort study was conducted among consecutive patients who received a diagnosis of community-acquired pneumonia (CAP) and needed ventilator support upon presentation to two tertiary care, university-affiliated EDs. The use of non-invasive ventilation (NIV) in severe acute respiratory failure due to CAP is controversial, and the risk factors for NIV failure in these patients are not well known. Previous reports have shown that, severity scores at admission and worse respiratory and cardiovascular function were associated with NIV failure [2,3]. Variables related with initial severity and worse clinical evolution in pneumonia, such as the need for vasoactive drugs, organ system dysfunction, and extension and worsening of radiological infiltrates, were also associated with failure [2,3]. Similar to previous studies, Al-Rajhi and colleagues found that NIV failure was associated with the absence of chronic obstructive airway disease, APACHE II score, the need for hemodynamic support and the number of CXR quadrants involved. However, we think that the present study has several limitations. First, the effectiveness of any treatment must be determined by a randomized controlled trial. In the absence of a control group, definitive conclusions cannot be drawn. Second, the study was conducted in two centres with major experience in the use of NIV, and therefore these results cannot be extrapolated to less trained and equipped hospitals. Third, no data were provided on the severity of acute respiratory failure in the patients included in the study (for instance: PaO₂/FiO₂). It is different to use NIV at an early stage of respiratory failure (for instance when the PaO₂/ FiO₂ ratio is <250) or a late stage of acute respiratory failure in patients presenting with intubation criteria. The lack of these data does not allow comparison of this study with previous studies dealing with hypoxaemic respiratory failure. Moreover, intensive care admission and intubation criteria were not standardized and delay time of intubation after NIV failure was not recorded.

The recent literature suggests that patients with severe respiratory failure are less likely to be intubated when NIV support is added to the standard medical treatment; the key to success is patient selection and early implementation of NIV. Therefore, the efficacy of NIV in patients with severe CAP, should be evaluated in a prospective randomized controlled trial.

Funda Sungur Biteker, MD

Yatağan State Hospital, Department of Infectious Diseases and Clinical Microbiology, Turkey

Eda Özlek, MD

Bülent Özlek, MD

Oğuzhan Çelik, MD*

Cem Çil, MD

Volkan Doğan, MD, Assist Prof

Murat Biteker, MD, Associate Prof

Muğla University, Faculty of Medicine, Department of Cardiology, Turkey

*Corresponding author at: Muğla Sitki Kocman Üniversitesi Tıp Fakültesi, Kotekli Mahallesi, Marmaris Yolu, No:48, 48000 Muğla, Turkey.

E-mail address: oguzhan.celik1@saglik.gov.tr (O. Çelik)

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Psychosocial emergencies in the elderly



In the US, it is estimated that the number of Americans over the age of 65 will double from roughly 50 million at present to 100 million by 2060 [1]. As the age and size of this group increases, the appropriateness, effectiveness, cost, and outcome of emergency medical care provided to them will be of special concern. Older patients are often more acutely ill than younger patients, many times requiring longer hospital stays with greater risk of readmission upon discharge [2,3]. There are risk factors plaguing the elderly that may contribute to increased utilization of the Emergency Department (ED). These factors include but are not limited to depression, poor self-care, falls, poor memory, the potential for abuse, polypharmacy, and having a fixed or limited income [4,5]. Along with treatment, the ED is an excellent place to introduce secondary prevention. It is a place where elderly persons who have functional, cognitive, and social impairments may be identified and linked to appropriate services for further evaluation and management. The aims of this study were to: 1) identify key social problems among the elderly as they present to an ED; 2) compare the epidemiology, assessment and treatment patterns with results from a similar study performed at this institution in 1989 [6].

This was a retrospective, cohort analysis of consecutive patients >64 years old who received medical social work (MSW) consultation in the ED at a university-affiliated hospital during a two-year study period (2013–2014). Demographics, medical history, presenting complaints, treatment, and disposition were obtained from ED records. Standardized abstraction forms were used to guide data collection. One investigator performed a blind critical review of a random sample of 10% of the charts to determine reliability. The main outcome criterion was the frequency of key social problems among the elderly. Epidemiology, assessment and treatment patterns were then compared to results from a similar study performed 25 years ago. Discrete variables were analyzed with the use of Yates chi-square test, corrected for continuity; 2-tailed unpaired *t*-tests and Wilcoxon rank sum tests for continuous and ordinal data.

During the study period, 1309 consecutive elderly patients received MSW consultation in the ED. The mean age was 78.4 ± 9.1 years; the oldest patient was 100 years old. The majority of elderly lived at home alone (31.4%), or with a family member or caregiver (47.6%). Elderly patients spent on average approximately 10.0 ± 12.1 h in the ED. Twenty risk factors were identified that predisposed older patients to psychosocial emergencies, including polypharmacy, hospitalization within the past 6 months and social isolation (Table 1). Compared to a similar study at our institution in 1990, the number of MSW consults in elderly patients has increased almost three-fold (370%). There are more male patients (49% vs. 39%, *P* < 0.001), and each patient had a greater number of risk factors (3.5 vs. 2.3, *P* < 0.001) and individual psychosocial problems (3.0 vs. 1.9, *P* < 0.001). The spectrum of psychosocial disease has also changed with significantly more terminal illness, care-taking issues, medication assistance, social isolation, and self-neglect (Table 2). Despite a net increase in the number of community resources utilized, more patients experienced a change in their living situation after discharge from the ED (43.9% vs. 24.9%, *P* < 0.001). Significant changes included greater use of short-term hospitalization, subacute rehabilitation centers, hospice care, and psychiatric admissions. The consistency of the data recording was excellent, with a median kappa statistic of 0.87.

Table 1
Risk factors that predisposed older patients to psychosocial emergencies.

>5 medications	47.5%
Comorbidity	35.5%
Hospitalization in past 6 months	30.7%
Social isolation	28.3%
History of diabetes	25.4%
Living alone	25.1%
Functional disability	20.6%
Memory impairment	18.8%
Recent decline in function	16.1%
Terminal illness	15.2%
Premorbid need for help	13.1%
Extreme age	10.4%
Alcohol/drug use	8.6%
Poor nutrition	7.5%
Depression	6.8%
Poor self-related health	6.6%
Lack of transportation	5.8%
Language barrier	1.3%
Homeless	0.8%
Info transfer problems	0.8%

Table 2
Spectrum of psychosocial problems in elderly patients.

Year	2013–2014 (N = 1309)	1988–1989 (N = 354)
Caregiver relief	70%	61%
Medication assistance	60%	4%
Emotional distress	30%	16%
Isolation	30%	10%
Self-neglect	25%	21%
Psychiatric	25%	5%
Alcohol/drugs	13%	9%
Terminal illness	9%	4%
Housing	7%	3%
Access to medical/dental care	6%	3%
Medical equipment	5%	2%
Transportation	4%	5%
Nutrition	4%	7%
Financial assistance	4%	2%
Abuse/caregiver neglect	3%	4%
Public housing assist	1%	3%
Marital issues	1%	<1%
Legal assistance	1%	<1%

During the past 24 years at our institution, the number and spectrum of psychosocial emergencies in older patients has significantly changed. Identifying patient needs and barriers to care after discharge from the ED is of high importance. Previous studies have found that patients encounter unanticipated needs or have problems which emerged after discharge and that interventions to ensure post-hospitalization follow-up may improve patient outcomes [7]. We found that there are greater numbers of “high-risk” elderly dealing with caregiver exhaustion, financial constraints, functional decline, depression, self-neglect, and social isolation. Although community-based services can be effective in addressing many of these needs, a growing proportion of elderly with psychosocial emergencies require a change in their living situation upon discharge from the ED. This functions as an added stressor, and the needs and mental state of the patient and their families or caregivers must be taken into account. It is also essential that vital information regarding functional status, cognitive status, medication lists and other directives are easily accessible by healthcare workers to properly support any transitional care both within and outside the ED [8]. Instruction prior to discharge and increased follow-up after discharge may help alleviate some barriers to care and reduce the numbers of patients necessitating admission or readmission to healthcare facilities.

Lindsey Ouellette¹
 Rachelle Halasa²
 Andrew Brown²
 Cindy Ong²
 Ryan Beckett²
 Sunny Shah²
 Deven Patel²

Michigan State University College of Human Medicine, Department of
 Emergency Medicine, United States

Dale McNinch²
 Jeffrey Jones*

Michigan State University College of Human Medicine, Department of
 Emergency Medicine, United States
 Department of Emergency Medicine, Spectrum Health Hospitals, Grand
 Rapids, MI, United States

*Corresponding author at: 15 Michigan St NE Suite 701, Grand Rapids,
 MI 49503, United States.

E-mail address: Jeffrey.Jones@spectrumhealth.org (J. Jones)

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¹ 15 Michigan St NE 736B, Grand Rapids, MI 49503, United States.

² 15 Michigan St NE Suite 701, Grand Rapids, MI 49503, United States.

Fluid resuscitation in pre-hospital patients with septic shock: One size does not fit all



To the editor:

We read the enchanting article by Jouffroy [1] et al., which is about fluid resuscitation in pre-hospital management of septic shock. We have some questions and different views after reading the article.

First of all, there are some mistakes in the study, as Table 1 in the commented paper [1] shows, the deceased patients at Day 28 had the same mean value of diastolic blood pressure as systolic blood pressure (both are 58 ± 19 mm Hg), it is nearly unbelievable. What is more,

Abbreviations: IBW, ideal body weight; SSC, Surviving Sepsis Campaign; CVP, central venous pressure; MAP, mean arterial pressure; ScvO₂, Superior vena cava oxygenation saturation; SvO₂, mixed venous oxygen saturation.