Predskazatelji unutarbolničke smrtnosti osoba starijih od 80 godina hospitaliziranih u modernoj intenzivnoj kardiološkoj jedinici

Predictors of intrahospital mortality of patients older than 80 years hospitalized in a modern intensive cardiac care unit

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Uvod: Unatoč mjerama intenzivnog liječenja smrtnost je u starijih bolesnika s akutnom kardiološkom bolesti značajno visoka.[1] Cilj ove studije je proučiti čimbenike koji utječu na unutarbolničku smrtnost bolesnika starijih od 80 godina koji su hospitalizirani u intenzivnoj kardiološkoj jedinici.

Bolesnici i metode: Analizirali smo podatke bolesnika starijih od 80 godina koji su hospitalizirani u Jedinici intenzivne kardiološke skrbi Kliničkog bolničkog centra Zagreb u razdoblju od 1. siječnja 2015. do 21. prosinca 2017. godine.

Rezultati: Ukupno je hospitalizirano 243 bolesnika starijih od 80 godina (13,39% od ukupnog broja hospitaliziranih u tom razdoblju), a od toga je bilo 146 žena (60,1%). Najčešća vodeća dijagnoza je bila akutni infarkt miokarda (n=107; 44%). Ostale karakteristike pacijenata su prikazane u **tablici 1**. Unutarbolnička smrtnost je iznosila 21,4%. Rezultati ukazuju kako su primarna dijagnoza kod prijema, težina prezentacije vodeće bolesti i uporaba invazivnijih načina liječenja glavni predskazatelji smrtnosti starijih bolesnika u intenzivnoj kardiološkoj jedinici (**tablica 2**).

Zaključak: Udio bolesnika starijih od 80 godina u ukupnom broju hospitaliziranih pacijenata u intenzivnim jedinicama nije zanemariv. Primjena metoda intenzivnog liječenja u bolesnika visoke životne dobi zahtijeva individualnu procjenu o samoj svrsishodnosti i ciljevima liječenja. Potreban je razvoj adekvatnih, po mogućnosti lokalno primjenjivih, modela za procjenu stanja ove osjetljive i značajne skupine bolesnika kako bi se racionalizirali resursi i optimizirali liječenje teških akutnih kardioloških bolesti u osoba visoke životne dobi.

Introduction: Despite intensive treatment mortality in elderly patients presenting with acute cardiac diseases remains high.[1] The aim of this study was to investigate factors associated with intrahospital mortality of patients older than 80 years who were hospitalized in intensive cardiac care unit.

Patients and Methods: We analyzed data from patients older than 80 years who were hospitalized in the Intensive Cardiac Care Unit of University Hospital Centre Zagreb in the period from 1st January 2015 to 31st December 2017.

Results: We identified 243 patients older that 80 years (13.39% of total number of hospitalized patients in that period), 146 being women (60.1%). Most common leading diagnosis was acute myocardial infarction (n=107; 44%). All patients' characteristics are displayed in **Table 1**. Intrahospital mortality was 21.4%. Results indicate that primary diagnosis, the severity of it's presentation and the use of more invasive treatment are the main predictors of elderly patients' mortality in intensive cardiac care unit (**Table 2**).

Conclusion: The share of patients older than 80 years in the total number of hospitalized patients in intensive care units is not negligible. Using intensive treatment in patients of advanced age requires individual assessment of its usefulness and treatment goals. It is necessary to develop adequate, preferably locally applicable models for assessing the condition of this sensitive and significant group of patients to rationalize resources and optimize treatment of severe acute cardiac diseases in individuals of advanced age.

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TABLE 1. Patient characteristics.

Patients' characteristics	
N (share in total number of patients hospitalized in CCU, %)	243 (13.39)
Age (years), mean (min-max)	84.21 (80-98)
Men, n (%)	97 (39.9)
Comorbidities	
Arterial hypertension, n (%)	210 (86.4)
Diabetes mellitus, n (%)	68 (28.0)
Atrial fibrillation, n (%)	85 (35.0)
Previous MI or stroke, n (%)	57 (24.1)
BMI (kg/m²), mean (min – max)	26.65 (15.4-47.9)
Primary diagnosis	
Myocardial infarction, n (%)	107 (44.0)
Pulmonary oedema, n (%)	37 (15.2)
Arrhythmia, n (%)	28 (11.5)
Pulmonary embolism, n (%)	1 (0.4)
TAVI, n (%)	30 (12.3)
Cardiorespiratory arrest, n (%)	15 (6.2)
Other, n (%)	25 (10.3)
Disease presentation	
Shock, n (%)	30 (12.3)
Creatinine (mcg/L), mean (min-max)	121.99 (36-664)
Ejection fraction (%), mean (min-max)	46.12 (10-74)
Treatment course	
Nosocomial pneumonia, n (%)	11 (4.5)
Dialysis procedure, n (%)	16 (6.6)
Mechanical ventilation, n (%)	92 (37.9)
Inotropic medication, n (%)	58 (23.9)
CCU hospitalization duration (days), mean (min-max)	2.37 (0. 04-27)
Reanimation, n (%)	46 (18.9)
In-hospital death, n (%)	52 (21.4)

BMI – body mass index; CCU – coronary care unit; MI – myocardial infarction; TAVI – transcatheter aortic valve implantation

TABLE 2. Intrahospital mortality predictors.

Univariabile and multivariable predictors of in-hospital mortality			
Predictors	Univariable analysis	Multivariable analysis	
	P	OR	P
Gender	0.427		
Primary diagnosis (MI, arrest)	**0.005**		
Shock	**<0.001**		
Reanimation	**<0.001**		
Inotropic support	**<0.001**		
Mechanical ventilation	**<0.001**		
Nosocomial pneumonia	**0.014**		
Dialysis procedure	**0.002**		
Severe valvular disease	0.260		
Arterial hypertension	**<0.001**		
Diabetes mellitus	0.589		
Atrial fibrillation	0.950		
Peripheral artery disease	0.214		
Previous MI or stroke	0.115		
BMI	0.578		
LVEF	**0.004**		
Shock		22.302	**<0.001**
Reanimation		15.051	**<0.001**
Inotropic support		3.003	0.059
Dialysis procedure		6.938	**0.016**

BMI – body mass index; LVEF – left ventricular ejection fraction; MI – myocardial infarction

LITERATURE

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