Utjecaj metaboličkog sindroma i spola na razvoj zatajivanja srca tijekom akutnog koronarnog sindroma

Influence of metabolic syndrome and gender on heart failure following acute coronary syndrome

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CILJ ISTRAŽIVANJA: Cilj istraživanja bio je odrediti učestalost zatajivanja srca (ZS) u pacijenata s akutnim koronarnim sindromom (AKS) u skupini pacijenata sa i bez metaboličkog sindroma (MetS). Analizirali smo također stopu ZS-a u obje skupine u odnosu na spol.

ISPITANICI I METODE: U istraživanje je uključeno 230 pacijenata s AKS-om hospitaliziranih tijekom 2006. i 2007. godine u Koronarnoj jedinici KB Dubrava. Pacijenti s MetS-om prema SZO definiciji¹ (n=141) imali su istovremenu prisutnost DM/intoleranciju glukoze uz još najmanje dva od slijedećih kriterija: arterijsku hipertenziju, hipertrigliceridemiju/nizak HDL kolesterol, androidni adipozitet/ indeks tjelesne mase (BMI) ≥ 30 ili mikroalbumuriju. Kontrolna skupina pacijenata nije zadovoljavala kriterije za MetS. Prisutnost ZS-a stupnjavana je temeljem klasifikacije po Killipu.

REZULTATI: Od 230 pacijenata 92 je imalo STEMI, 91 NSTEMI te 47 nestabilnu AP. Prisutnost ZS kod prijema ili tijekom hospitalizacije bila je signifikantno veća u skupini sa MetS. 89 od 230 pacijenata s AKS-om razvilo je znakove ili simptome ZS (stupnja Killip II ili više). Svega 28,1% pacijenata sa ZS-om bilo iz skupine bez MetS-a (25 pacijenata),

AIM: The aim of this study is to determine the heart failure (HF) incidence in patients suffering from acute coronary syndrome (ACS), regarding the presence of metabolic syndrome (MetS). We also analyzed HF incidence in both groups regarding gender. Methods: 230 patients with ACS hospitalized in Coronary Care Unit of Dubrava University Hospital, Zagreb during 2006 and 2007 were analyzed. Those with MetS according to WHO definition (n=141) included patients with DM/glucose intolerance and at least two of the following criteria: hypertension, hypertriglyceridemia/low HDL cholesterol, android obesity/body mass index (BMI) ≥ 30 , microalbuminuria. Control group did not meet criteria for MetS. Presence of heart failure was assigned according to Killip class.

RESULTS: Out of 230 patients 92 had STEMI, 91 NSTEMI and 47 unstable AP. Occurrence of HF on admission, or during hospitalization was significantly higher in the MetS group. 89 out of 230 patients have developed HF during ACS (grade Killip II or more). While only 28.1% of patients with heart HF were from non-MetS group (25 patients), even 71.9% of patients with HF (64 of them) were

FIGURE 1.

Heart failure occurrence according to metabolic syndrome in patients with acute coronary syndrome.

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FIGURE 2.

Heart failure occurrence according to gender and metabolic syndrome.

TABLE 1. Metabolic syndrome influencing heart failure.

Presence of metabolic syndrome		Presence of heart failure		p*****	Odds ratio
		No	Yes		
		n (%)	n (%)		
MetS	No	64 (71.9)	25 (28.1)	0.012	2.128
	Yes	77 (54.6)	64 (45.4)		

**** = Fisher's Exact Test.

čak 71,9% pacijenata sa ZS-om (ili 64 od njih 89) bilo je iz skupine s MetS-om (slika 1), što je bilo nešto izraženije u pacijentica (slika 2). Nasuprot tome, u skupini s MetS-om čak 45,4% (64 od 141) pacijenata razvilo je ZS ($p=0.012$, Odds ratio=2.128), što prikazuje tablica 1.

ZAKLJUČAK: Prisutnost MetS-a kod pacijenata s AKS-om predisponira k većoj stopi ZS-a tijekom hospitalizacije. Uspoređujući s pacijentima bez MetS-a, imajući u vidu i spol pacijenata, ZS ima tendenciju k češćoj pojavnosti u žena s MetS-om i AKS-om, suprotno nego u skupini bez MetS-a (slika 2). Možemo reći da pacijenti koji prebolijevaju AKS te ispunjavaju kriterije za AKS imaju povećani rizik za ZS-a te zbog toga zahtijevaju intenzivnije praćenje.

from the MetS group (Figure 1), which was again relatively more emphasized in females (Figure 2). When analyzing according to MetS presence, 71.9% (64) of patients without MetS did not developed HF, and only 28.1% (25) had, while in MetS group (Table 1) even 45.4% (out of 141) developed HF ($p=0.012$, Odds ratio=2.128).

CONCLUSIONS: Occurrence of MetS in ACS patients predisposes to higher rate of HF during hospitalization. Comparing with patients with no MetS HF in patients with ACS and MetS has tendency to occur more in females (Figure 2). We can conclude that patients with MetS having ACS are group with increased risk for HF and as a such need more intensive surveillance.

LITERATURE

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