Kratkoročni ishodi u bolesnika starijih od 75 godina s akutnim koronarnim sindromom bez elevacije ST-segmenta liječenih perkutanom koronarnom intervencijom: izvješće iz Registra ISACS-TC

Short term outcomes in the elderly patients with non-ST-elevation acute coronary syndromes undergoing early percutaneous coronary intervention: a report from the ISACS-TC registry

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Uvod: S obzirom na starenje populacije u Europi, bit će sve više bolesnika starijih od 75 godina hospitaliziranih zbog akutnog koronarnog sindroma bez elevacije ST-segmenta (NSTE-ACS). Unatoč navedenome, postoje samo ograničeni podaci o ishodima liječenja u ovih bolesnika, bilo u opservacijskim studijama, bilo u randomiziranim kliničkim istraživanjima.[1] Htjeli smo istražiti može li rana (unutar 24 sata od hospitalizacije) perkutana koronarna intervencija (PCI) poboljšati ishode u bolesnika starijih od 75 godina.

Bolesnici i metode: Analizirali smo bolesnike starije od 75 godina, hospitalizirane u 41 bolnici koje sudjeluju u registru ISACS-CT (NCT01218776) od siječnja 2010. do siječnja 2018. godine. Primarni ishod je bio sastavljen od 30-dnevne smrtnosti i značajne sistoličke disfunkcije lijeve klijetke (LVSD, definirane kao ejekcijska frakcija <30% na ehokardiografiji prilikom otpusta iz bolnice). Sastavnice primarnog ishoda analizirane su kao sekundarni ishodi. Za analizu sigurnosti terapije analizirali smo učestalost velikih i malih krvarenja prema TIMI (*Thrombolysis in Myocardial Infarction*) klasifikaciji. Proveli smo landmark analizu isključujući iz studije bolesnike koji su umrli unutar prvih 24h nakon hospitalizacije. Također smo isključili bolesnike liječene PCI-om nakon 24h od hospitalizacije i one upućene na aortokoronarno premoštenje. Kao dodatnu analizu, proveli smo i IPTW (*inverse probability of treatment weighting*) analizu.

Rezultati: Bilo je 957 bolesnika prosječne dobi 80 ± 4 godina u farmakoterapijskoj skupini i 298 bolesnika prosječne dobi 79 ± 4 godine u PCI skupini. Nakon multivarijatne regresijske analize (prilagodba za utjecaj dobi, spola, bubrežne funkcije, čimbenika rizika, kliničke slike, prijašnjih kardiovaskularnih bolesti te terapije primijenjene tijekom prva 24h nakon hospitalizacije), rana PCI je smanjila incidenciju primarnog ishoda (OR 0,38; 95% CI 0.22–0.68). Incidencija sekundarnih ishoda LVSD i 30-dnevne smrtnosti je također bila smanjena (OR 0,45; 95% CI 0,23-0,88) i (OR 0,33; 95% CI 0,13-0,84). Učinak na primarni ishod je bio prisutan i nakon IPTW analize, iako je učinak bio slabije izražen (OR 0,89; 95% CI 0,85-0,92); **slika 1**). Učestalost krvarenja u PCI skupini je bila 4 bolesnika (2,4%), a u farmakoterapijskoj skupini 0 bolesnika (p = 0.671).

Background: Due to an ageing population in Europe, there will be more and more elderly patients presenting with non-ST-elevation acute coronary syndromes (NSTE-ACS). Despite these findings there is limited data available on outcomes of elderly patients (>75 years) either in observational studies or randomized controlled trials.[1] Objective: To explore whether early percutaneous coronary intervention (PCI) within 24 hours of admission may improve outcomes in elderly patients (>75 years).

Patients and Methods: We analyzed elderly patients enrolled in 41 hospitals referring data to the International Survey of Acute Coronary Syndromes in Transitional Countries (ISACS-TC)

registry (NCT01218776) from January 2010 to January 2018. The primary end-point was composed of 30-day mortality and severe LVSD, defined as ejection fraction <30% as measured by echocardiography on discharge. The components of primary end-point were analyzed as secondary end points. For the safety analysis Thrombolysis in Myocardial Infarction (TIMI) major and minor bleeding events were analyzed. A landmark analysis was performed with a cut-off point of 24h excluding all patients that died within this time. We also excluded all patients who received PCI after 24h or who had a coronary artery bypass surgery. As an added analysis we also performed an inverse probability of treatment weighting (IPTW) analysis to balance clinical covariates.

Results: There were 957 subjects with a mean age of 80±4 years in the medical therapy group and 298 subjects with a mean age of 79±4 years in the PCI group. After multivariate adjustment for age, sex, renal function, risk factors, clinical presentation, prior cardiovascular disease and in hospital medical therapy (within 24h), early PCI reduced the occurrence of the primary end-point in the cohort (OR, 0,38; 95% CI 0.22–0.68). The secondary endpoints of severe LVSD and 30-day mortality were reduced in the PCI cohort as well (OR 0,45; 95% CI 0,23-0,88) and (OR 0,33; 95% CI 0,13-0,84) respectively. The effect on the primary end-point persisted after IPTW, even though the effect was less pronounced in comparison with the unweighted model (OR 0,89; 95% CI 0,85–0,92); **Figure 1**). Bleeding events oc-

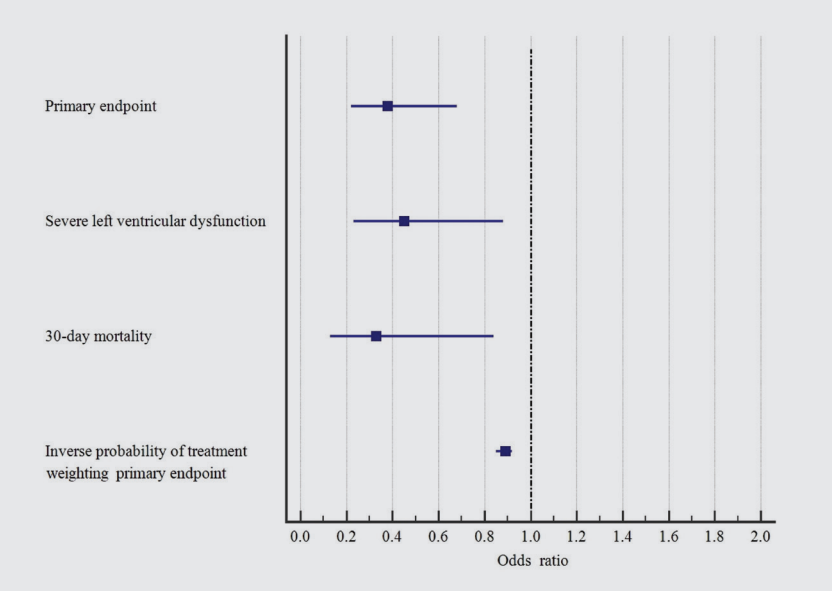

FIGURE 1. Multivariate regression analysis of primary and secondary outcomes.

Zaključak: Bolesnici stariji od 75 godina koji su liječeni PCI-om unutar 24h nakon hospitalizacije pokazali su smanjenu učestalost primarnih i sekundarnih ishoda u usporedbi s bolesnicima liječenima samo farmakoterapijom. Nije bilo statistički značajne razlike u incidenciji krvarenja među skupinama.

curred in 4 patients (2.4%) in the PCI group and 0 in the medical therapy group (P=0.671).

Conclusion: Elderly patients treated with early PCI showed reduced rates of primary and secondary end-points compared to those treated with medical therapy. There was no significant difference in the number of bleeding rates between the groups.

LITERATURE

1. Couture EL, Farand P, Nguyen M, Allard C, Wells GA, Mansour S, et al. Impact of an invasive strategy in the elderly hospitalized with acute coronary syndrome with emphasis on the nonagenarians. Catheter Cardiovasc Interv. 2018 Sep 30. [Epub ahead of print]. https://doi.org/10.1002/ccd.27877