Dokumenttyp: journal article

Autor(en) des Beitrags:
Steg, P G; Lopez-de-Sà, E; Schiele, F; Hamon, M; Meinertz, T; Goicolea, J; Werdan, K; Lopez-Sendon, J L; VIVIFY (eValuation of the IntraVenous If inhibitor ivabradine after STsegment elevation mYocardial infarction) investigators; Steg, P-G; Lopez-Sendon, J L; Steg, P-G; Slama, M; Coste, P; Garot, P; Puel, J; Elbaz, M; Albert, F; Charbonnier, B; Hamon, M; Schiele, F; Missault, L; Van de Werf, F; Lopez-de-Sa, E; Macaya, C; Goicolea, F J; Buen, H; Hamm, C W; Bohm, M; Meinertz, T; Richardt, G; Schunkert, H; Werdan, K; Gitt, A; Aylward, P; Horowitz, J

Titel des Beitrags:
Safety of intravenous ivabradine in acute ST-segment elevation myocardial infarction patients treated with primary percutaneous coronary intervention: a randomized, placebo-controlled, double-blind, pilot study.

Abstract:
Rapid heart rate lowering may be attractive in acute ST-segment elevation myocardial infarction (STEMI). Accordingly we studied the effect of intravenous ivabradine on heart rate in this setting. This was a multicenter randomized double-blind placebo-controlled trial: patients aged 40-80 years were randomized after successful primary percutaneous coronary intervention (PCI) performed within 6 h of STEMI symptom onset. Patients were in sinus rhythm and with heart rate>80 bpm and systolic blood pressure>90 mm Hg. They were randomly assigned (2:1 ratio) to intravenous ivabradine (n=82) (5 mg bolus over 30 s, followed by 5 mg infusion over 8 h) or matching placebo (n=42). The primary outcome measure was heart rate and blood pressure. In both groups, heart rate was reduced over 8 h, with a faster and more...
marked decrease on ivabradine than placebo (22.2 ± 1.3 vs 8.9 ± 1.8 bpm, p<0.0001). After treatment
discontinuation, heart rate was similar in both groups. Throughout the study, there was no difference
in blood pressure between groups. There was no difference in cardiac biomarkers (creatine kinase
(CK-MB), troponin T and troponin I). On echocardiography performed at baseline and post treatment
(median 1.16 days), final left ventricular volumes were lower in the ivabradine group both for left
ventricular end-diastolic volume (LVEDV) (87.1 ± 28.2 vs 117.8 ± 21.4 ml, p=0.01) and left ventricular
end-systolic volume (LVESV) (42.5 ± 19.0 versus 59.1 ± 11.3 ml, p=0.03) without differences in
volume change or left ventricular ejection fraction. This pilot study shows that intravenous ivabradine
may be used safely to slow the heart rate in STEMI. Further studies are needed to characterize its
effect on infarct size, left ventricular function and clinical outcomes in this population.