

# Rekurentno krvarenje iz gastrointestinalnog trakta povezano s uređajem za mehaničku potporu lijevoj klijetki – uspješno liječenje oktreotidom

## Left-ventricular assist device related recurrent gastrointestinal bleeding – successfully treated with octreotide

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**Uvod:** Uređaj za mehaničku potporu lijevoj klijetki (LVAD od engl. *left ventricular assist device*) koristi se u naprednom liječenju srčanog zatajivanja i povezan je sa značajnim rizikom krvarenja iz gastrointestinalnog (GI) trakta. Prikazujemo slučaj ponavljajućeg krvarenja iz GI trakta povezan s primjenom LVAD, neodgovarajućeg odgovora na standardne mjere liječenja a uspješno liječen oktreotidom u subkutanom i intramuskularnom obliku.

**Prikaz slučaja:** Prikazujemo 61-godišnjeg bolesnika u kojega je zbog ishemijske kardiomiopatije implantiran HeartMate II LVAD kao strategija liječenja premoštenja do transplantacije. Inicijalno antikoagulantno liječenje uključivalo je varfarin s ciljnim vrijednostima INR 2-3, uz acetilsalicilatnu kiselinu 150 mg i klopidogrel 75 mg uključen u terapiju nakon perkutane koronarne intervencije. Tri tjedna nakon otpusta pacijent se javlja sa melenom koja zahtijeva transfuziju krvi. U sljedeća četiri mjeseca nekoliko puta je rehospitaliziran zbog anemije i krvarenja iz GI trakta usprkos isključivanju iz terapije acetilsalicilatne kiseline, klopidogrela te titriranja doze antikoagulatne terapije do INR 1,5-2,0. Von Willebrandov sindrom, hemoliza ili disfunkcija uređaja nije se dokazala. Ponavljane ezofagogastroduodenoskopije i kolonoskopija nisu dokazale izvor krvarenja. Scintigrafija obilježenim eritrocitima i endokapsula ukazale su u jednom navratu na krvarenje iz proksimalnog dijela tankog crijeva, no bez identificirane lezije. Brzina LVAD smanjena je kako bi se povećala pulsativnost. Započeto je liječenje oktreotidom u dozi 100 µg subkutanom u dvije dnevne doze te po otpustu 10mg jednom mjesečno intramuskularno. Zbog ponavljajućeg krvarenja iz GI trakta tijekom liječenja učinjena je pauza varfarina u trajanju 20 dana, a antikoagulantna terapija nastavljena niskomolekularnim heparinom subkutanom. Pacijent nije imao potrebu za nadomjesnim krvnim preparatima 3 mjeseca i stabilnih je vrijednosti hemoglobina.

**Diskusija:** Krvarenje iz gastrointestinalnog trakta najčešći je uzrok rehospitalizacije u bolesnika sa LVAD-om, uglavnom LVAD kontinuiranog protoka.<sup>1,2</sup> Oktreotid pokazuje dobar trend u smanjenju učestalosti hospitalizacija, potreba za transfuzijom krvi u ovih bolesnika, no potrebno je daljnje ispitivanje.

**Introduction:** Left ventricular assist device (LVAD) is used for the management of advanced heart failure patients and associated with a significant risk of gastrointestinal (GI) bleeding. We describe a case of LVAD related recurrent GI bleeding unresponsive to conventional management and successfully treated with a combination of subcutaneous and intramuscular depot formulations of octreotide.

**Case report:** Patient is a 61-year-old man with ischemic cardiomyopathy who was implanted with a HeartMate II LVAD as a bridge to transplantation. The initial anticoagulation regimen consisted of a vitamin K antagonist (warfarin) with a goal international normalized ratio (INR) of 2-3, aspirin of 150 mg daily and clopidogrel of 75 mg added after percutaneous coronary intervention of native coronary vessel. Three weeks following discharge, the patient was evaluated for melena, necessitating blood transfusions. Over next four months he had repeated hospital readmissions, each requiring multiple blood transfusions despite stopping the aspirin, clopidogrel and reducing the goal INR to 1.5-2.0. No evidence of Von Willebrand syndrome, hemolysis or pump malfunction was revealed. Repeated esophagogastroduodenoscopy and colonoscopy did not reveal any active source of bleeding. Red blood cell scintigraphy bleeding scan and capsule endoscopy revealed on one occasion bleeding in the proximal small bowel, but no identifiable source. LVAD pump speed was also reduced in an effort to achieve increased pulsatility. He was started on 100 µg SC octreotide twice daily and then switched to 10 mg IM injections monthly. Due to recurrent bleeding warfarin was discontinued for period of 20 days without sign of pump thrombosis, and anticoagulation was continued applying low molecular heparin. He did not require any transfusions for 3 months, and his hemoglobin remains stable.

**Discussion:** Gastrointestinal bleeding is the most common cause of readmission in patients supported by continuous flow left ventricular assist devices, mainly continuous flow LVADs.<sup>1,2</sup> Octreotide exhibit a favorable trend in the frequency of admissions, blood transfusions in patients with recurrent GI bleeding but further prospective studies are needed.

### LITERATURE

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