Angiografija vene subclaviae pri implantaciji trajnog elektrostimulatora srca

Angiography of subclavian vein at the implantation of permanent heart pacemaker

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Implantacija trajnih elektrostimulatora srca danas je rutinska procedura liječenja najčešćih bradikardnih poremećaja ritma. Kod većine pacijenata se punkcijom lijeve vene subclavije uvedu elektrode za stimulaciju do srčanih šupljina desnog atrija, desnog ventrikula, a kod CRT uređaja i do područja lijevog ventrikula putem sinusa coronariusa. Kao pomoć za sigurnu i uspješnu punkciju poželjno je imati i angiografiju vene subclavije s njenim utokom u venu cavu superior.[1] Neke ustanove provode rutinsko angiografsko snimanje vene subclaviae kod svih pacijenata kojima se implantira elektrostimulator srca. U kardiološkom laboratoriju Opće bolnice Zadar ne provodimo obaveznu angiografiju vene subclavie prije postavljanja trajnog elektrostimulatora srca, ali imamo pripremljen venski put s produžnicom, sistemom za infuziju i trodijelnim nastavkom za davanje jodnog kontrasta i snimanje venske angiografije. U slučaju neuspješne punkcije vene subclavije u tipičnoj regiji pristupamo snimanju vene. Ovom metodom izbjegavamo opetovane punkcije i samim tim smanjujemo rizik od komplikacija. Posebno bi naglasili da time apsolutno izbjegavamo mogućnost jatrogenog nastanka pneumotoraksa, koji bi ukoliko nastane zahtijevao produžetak hospitalizacije. Također sama angiografija vena daje nam podatak o eventualnim malformacijama ili varijacijama venskog sliva te se možemo adekvatno pripremiti za brzu i uspješnu implantaciju trajnog elektrostimulatora srca.

Implantation of permanent pacemaker is a routine procedure nowadays for treatment of bradyarrhythmia. Usually, electrodes are inserted to the right atrium, right ventricle and in case of CRT implantation to left ventricle area through coronary sinus, by the puncture of left subclavian vein. To ensure safe and successful puncture, it is desirable to do angiography of subclavian vein with its inflow into vena cava superior.[1] In some institutions it is a standard procedure. In the Cardiac Catheterization Lab of Zadar General Hospital, angiography is not performed in routine manner, but a venous path with an extension is prepared with infusion system and triangular extension for iodine contrast and venous angiography. In case of complex anatomy and difficult puncture of subclavian vein, angiography of subclavian vein is preformed to guide puncture. With this method repeated punctures are avoided and thus the risk of complications is reduced. It is important to emphasize that with the described approach, the possibility of provoking iatrogenic pneumothorax is minimalized, which is complication that extends the length of hospitalization. Also, subclavian venography itself gives us information on possible anatomic malformations or vein variations, and we can be adequately prepared for fast and successful implantation of permanent pacemakers.

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