

Percutaneous implantation of a blood flow reducer in coronary sinus – a modern method for the treatment of refractory angina pectoris

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Introduction: Angina pectoris is deemed refractory when it cannot be controlled with optimal pharmacotherapy and revascularization of the coronary arteries, and lasts for three or more months¹. The percutaneous implantation of a blood flow reducer through the coronary sinus represents a potential alternative treatment option. The implantation of a flow reducer leads to a decrease in the effective diameter of the coronary sinus, thus slowing down blood flow². This results in an increase in pressure in the sinus, and consequently in the coronary circulation, which leads to a redistribution of blood from well-perfused to poorly perfused areas of the myocardium. *Aim:* To present an alternate therapy for patients with refractory angina by implantation of a blood flow reducer in the coronary sinus.

Case report: 76-year-old patient with known coronary disease, hypertension, and hyperlipidemia, reports angina during a minimal walk (8/10) despite the previous revascularization of the coronary arteries (PCI and CABG), and optimal pharmacotherapy is referred for the implantation of Flow reducer. Under ultrasound control, a sheath was placed in the right jugular vein. An MP catheter was introduced in the coronary sinus, and its anatomy was visualized with contrast. A flow reducer (steel mesh – hourglass appearance) was implanted over a stiff wire. The venogram confirmed the proper position of the device. The optimal effect is expected around six weeks after installation.

Conclusion: Percutaneous implantation of a flow reducer has been used worldwide for many years and has proven to be an effective method in the treatment of refractory angina. Studies have shown that this method leads to a subjective improvement of the symptoms of angina pectoris as well as a reduction of myocardial ischemia on MRI.

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LITERATURE

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