

**[Use of carbon dioxide as contrast agent to perform balloon angioplasty of the superficial femoral artery in a patient with severe renal impairment].**

[Article in Italian]

Sbarzaglia P1, Micari A1, Castriota F1, Cremonesi A1.

**Author information**

G Ital Cardiol (Rome). 2015 Dec;16(12):696-9. doi: 10.1714/2088.22588.

**Abstract**

Endovascular treatment of symptomatic atherosclerotic peripheral artery disease has gained widespread acceptance and is now recommended as the primary revascularization strategy in many clinical and interventional settings.

Nevertheless, endovascular strategy finds a relative contraindication in patients affected by severe chronic kidney disease, because of nephrotoxicity of iodinated contrast medium. Carbon dioxide (CO<sub>2</sub>) angiography permits to obtain vascular angiography without the use of a iodinated contrast medium, therefore it is ideal in chronic kidney disease patients because it is not nephrotoxic and does not have appreciable medical contraindications. In this report we describe a case of percutaneous transluminal angioplasty of an occluded left superficial femoral artery using CO<sub>2</sub> as contrast medium, because of severe chronic kidney disease (glomerular filtration rate 28 ml/min/1.73 m<sup>2</sup>). This complex procedure required double vascular access with retrograde popliteal access associated with femoral access, which was performed successfully despite a very low use of iodinated contrast medium. This case report is also the starting point for a review of literature data regarding CO<sub>2</sub> use for peripheral intervention.