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Presentation Abstract

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3048/C213 - A New Stainless-Steel-Free Stent with a Potential of Artifact-Free Magnetic Resonance Compatibility: First Clinical Experience

Sigmund Silber, Cardiology Practice and Hospital, Munich, Germany
Thomas Fetsch, IKKF, Munich, Germany

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Abstract:

Background: Magnetic resonance of the heart is being increasingly used in cardiology practice. While perfusion studies and ,,late enhancement" have become established practice, non-invasive cardioangiography with cardio-MRT is still in the development stage. Within this context, it has become desirable to develop coronary stents which do not--as opposed to stainless steel stents--create image artifacts in MRT images Based on its special material properties, niobium may be the potential solution due to being completely free of stainless steel components. In a previously presented randomized study it was shown that niobium stents are safe and do not increase in-stent restenosis. The objective of the present study is to assess the application and restenosis rates of niobium stents (LunarRox) Methods: We investigated 116 patients in a total of 10 centers. The stents were available in diameters of 2.75-mm, 3.0-mm und 3.5-mm and in lengths of 12, 16 und 20 mm. Results: 79% of the investigators evaluated the material properties of the niobium stent as "better"compared with stainless steel stents. The very good x-ray visibility was deemed advantageous by 97.4% of the investigators. Clinical follow-up was performed in 100% of the patients: the clinical restenosis rate was 7.7% (9/116). Conclusions: The new stainless-steel-free niobium stent with an increased x-ray visibility is safe and shows a high technical success rate. Its clinical restenosis rate is a mere 7.7%. Due to its properties, the niobium stent has the potential to allow non-invasive cardioangiography with magnetic resonance imaging.

American Heart Association
7272 Greenville Avenue
Dallas, Texas 75231

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Phone in U.S.: