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Die perkutane transluminale Rekanalisation chronischer Arterienverschlüsse



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List of Abbreviations

CAD coronary artery disease

PCI percutaneous coronary intervention

1 Introduction

1.1 Coronary Artery Disease

Coronary artery disease (CAD) is defined by luminal narrowing of the coronary arteries as illustrated in FIGURE 1.1.

1.1.1 Percutaneous Coronary Intervention

An introduction to CAD was given in SECTION 1.1. The first percutaneous coronary intervention (PCI) was performed at the University Hospital Zurich by Andreas Grüntzig².

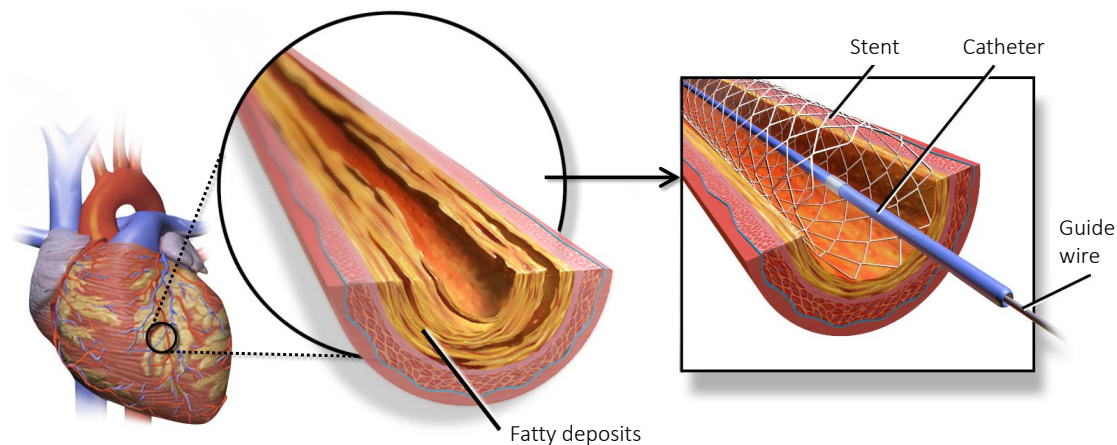


Figure 1.1: Coronary artery disease. A coronary artery narrows due to fibrofatty plaques. Coronary stents can be used for interventional revascularization. Image courtesy of Blaus, B¹.

2 Summary of Included Papers

The following paper describes percutaneous recanalisation with a new double lumen dilatation catheter*:

Grüntzig, A. R. *Die perkutane Rekanalisation chronischer arterieller Verschlüsse (Dotter-Prinzip) mit einem neuen doppelumigen Dilatationskatheter in RöFo-Fortschritte auf dem Gebiet der Röntgenstrahlen und der bildgebenden Verfahren* **124** (1976), 80–86.

A modification of Dotter's transluminal recanalisation of stenoses and occlusions of the superficial femoral artery, and of stenoses of the iliac artery, is described. In this procedure the occluding material is compressed not by successive catheters, but by a catheter with a dilatable cover. This catheter consisted originally of a single lumen, but now has double lumen; one lumen accommodates contrast, or a guide wire or a stiff cannula, whereas the second lumen is used for filling the cover and the expandable segment. The procedure is described in detail. Results so far appear satisfactory; they are compared with the results which have been obtained during the last year with the single lumen catheter.

*This and all following publications are presented as edited versions of the papers' abstracts.

3 Conclusion

Write your conclusion.

4 Final Remarks

Write your final remarks.

5 References

1. Blaus, B. *Medical gallery of Blausen Medical 2014* <http://dx.doi.org/10.15347/wjm/2014.010>. Online; accessed 09-27-2019; adapted according to Creative Commons Attribution 3.0 Unported (CC BY 3.0) license. 2014.
2. Meier, B., Bachmann, D. & Lüscher, T. F. 25 years of coronary angioplasty: almost a fairy tale. *The Lancet* **361**, 527 (2003).
3. Grüntzig, A. R. *Die perkutane Rekanalisation chronischer arterieller Verschlüsse (Dotter-Prinzip) mit einem neuen doppelumigen Dilatationskatheter in RöFo-Fortschritte auf dem Gebiet der Röntgenstrahlen und der bildgebenden Verfahren* **124** (1976), 80–86.

6 Discussed Papers

6.1 Papers Discussed in the Thesis

The following papers are discussed in this postdoctoral thesis. The best three of these papers are marked with an asterisk (*).

1. **Grüntzig, A. R.** *Die perkutane Rekanalisation chronischer arterieller Verschlüsse (Dotter-Prinzip) mit einem neuen doppelumigen Dilatationskatheter in RöFo-Fortschritte auf dem Gebiet der Röntgenstrahlen und der bildgebenden Verfahren* **124** (1976), 80–86.
2. ***Grüntzig, A. R.**, Senning, Å. & Siegenthaler, W. E. Nonoperative dilatation of coronary-artery stenosis: percutaneous transluminal coronary angioplasty. *New England Journal of Medicine* **301**, 61–68 (1979).

6.2 Papers of High Scientific Value

The following papers were categorized as being of high scientific value – according to personal, subjective rating. They are not discussed within this postdoctoral thesis.

1. **Grüntzig, A. R.**, Riedhammer, H., Turina, M. & Rutishauser, W. in *Thema: Kontraktibilität des Myokards* 282–285 (Springer, 1976).

7 Original Papers

The papers discussed in this postdoctoral thesis are reprinted in the following.

GRÜNTZIG, Andreas R.

**Die perkutane Rekanalisation chronischer
arterieller Verschlüsse (Dotter-Prinzip) mit einem
neuen doppelumigen Dilatationskatheter.**

In: *RöFo-Fortschritte auf dem Gebiet der Röntgenstrahlen und der bildgebenden Verfahren.*

© Georg Thieme Verlag KG Stuttgart

New York, 1976. S. 80-86.

GRÜNTZIG, Andreas R.; SENNING, Åke; SIEGENTHALER, Walter E.

**Nonoperative dilatation of coronary-artery
stenosis: percutaneous transluminal coronary
angioplasty.**

New England Journal of Medicine
1979, 301. Jg., Nr. 2, S. 61-68.

8 Acknowledgments

Write your acknowledgments.