

IN-STENT RESTENOSIS

The introduction of intracoronary stents into clinical practice has dramatically changed treatment of obstructive coronary artery disease. Unfortunately, the procedure's utility is limited by a frequent complication: restenosis. At the moment, repeat balloon angioplasty is considered to be the first line treatment option, especially in focal lesions. The recent introduction of drug-eluting stents (DESs) may help prevent ISR. However, DESs have not been universally successful, and they may introduce new complications that require further refinement. This review summarizes the current understanding of the pathogenesis of ISR and provides an objective overview of DESs.

Key Words: PTCA, stent, restenosis, drug eluting stents

ÖZET

Stent İçi Restenoz

Koroner girişimlerde stentlerin kullanılması koroner arter hastalığının tedavisini dramatik olarak değiştirmiştir. Ancak bu girişim sıklıkla restenoz adı verilen bir süreçle sınırlanmaktadır. Restenozun özellikle fokal restenozların ilk tedavi seçeneği tekrarlayan balon anjiyoplastilerdir. Son yıllarda ilaç kaplı stentlerin (İKS) kullanılmaya başlanmasıyla birlikte stent içi restenoz oranları azalmaya başlamıştır. Bununla beraber İKS kullanımında universal bir başarı tanımlanmamış üstelik yeni komplikasyonların tanınmaya başlamasıyla tartışılır hale gelmiştir. Bu derlemede stent içi restenozun fizyopatolojisini güncel bilgiler ışığında anlamayı ve İKS lerin bu süreci nasıl etkilediğini gözden geçireceğiz.

**Osman Karakaya MD,
Ali Metin Esen MD**

From:

Kosuyolu Heart Education and Research Hospital, Department of Cardiology, Istanbul, Turkey

Address for reprints

Osman KARAKAYA, MD
19 Mayıs Mahallesi Sarıkanarya Sok.
Muhsinbey Apt. No: 25/17-Kozyatığı
Istanbul/TURKEY
Telefon: 0 505 716 11 16
Faks: +90 2163390441
e-posta: drkarakaya@yahoo.com

INTRODUCTION

Percutaneous transluminal coronary angioplasty has revolutionized the management of patients with coronary artery disease. The introduction of intracoronary stents into clinical practice has dramatically changed treatment of obstructive coronary artery disease. Unfortunately, the procedure's utility is limited by a frequent complication: restenosis. Coronary stenting prevents the elastic recoil and negative remodeling that can occur after angioplasty. Since having been shown to significantly reduce restenosis as compared to PTCA in selected lesions,^{1,2} the indication for stent implantation has been widened substantially. But, by inciting varying degrees of intimal expansion, it can also produce arterial renarrowing, known as in-stent restenosis (ISR). Restenosis is an iatrogenic novel "disease". As a result of a dramatic increase in implantation numbers worldwide in less selected and more complex lesions (bypass grafts, restenotic lesions, unstable angina, myocardial infarction), in-stent restenosis has been disclosed as a new entity with significant clinical and socioeconomic implications.