An Overview of Coronary Artery Stents for the Primary Care Provider

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Introduction: The alarming rate of coronary artery disease (CAD), which claims about 385,000 lives annually, inspires innovative research in the development of procedures and therapies in cardiology. The coronary artery stent is currently the chosen therapy for restoring blood flow, commonly referred to as revascularization. However, blockage of the vessel may still occur due to irritating factors of the stent, such as vessel wall inflammation and stent migration. Biodegradable products of coronary stents address this problem by natural absorption of the stent into the body.

Purpose: One of the challenges currently facing primary care providers is remaining up to date with advances in medical technology and treatment modalities. While specialists are necessary for coronary artery stent placement, the primary care provider is responsible for the ongoing care of these patients and therefore needs a basic understanding of the wide array of devices available, dual antiplatelet therapy, and signs and symptoms of restenosis. The purpose of this review is to provide primary care providers with current information on appropriate therapy and monitoring of patients with coronary artery stents.

Evidence Based Approach: Search criteria limited to English language articles, publication dates from 2006 to 2015, which discuss the use of bare metal stents, drug-eluting stents and biodegradable stents in coronary arteries. Databases include Medline, CINAHL and Cochrane Library.

Conclusion: With high rates of CAD in the United States, the need for new and improved treatment modalities is imperative. While coronary artery stents are the preferred means of revascularization of an occluded vessel, stents are known to cause vessel wall irritation, leading to restenosis. Bare Metal Stents and Drug-Eluting Stents are the most commonly used stents in the United States. Bioabsorbable stents are the next generation of therapy for coronary artery revascularization. The role of dual anti-platelet therapy in conjunction with these stents is less clear, but will likely continue to change with stent and pharmaceutical advances. A challenge for primary care providers is to stay up to date with current therapies in the ever expanding field of medical technology. This overview provides a resource for primary care providers who are responsible for monitoring patients with coronary artery stents.