NOVEL CARDIAC CATHETER

Published date: March 28, 2017

Technology description

UCSFinventors have designed a catheter that will circumvent the problems posed by tortuous anatomy and anomalous anatomy that may hinder successful and efficient completion of cardiac catheterization procedures used to diagnose and treat CVD.
Cardiac catheterization, angioplasty, and related catheter-based interventions are known as the most significant discoveries made in cardiovascular medicine. Currently, >700,000 cardiac catheterizations and >600,000 percutaneous coronary interventions (PCI) are performed annually in the United States. Such techniques have evolved over the past century, providing researchers and physicians a better understanding of basic cardiovascular biology and have enabled accurate diagnoses, effective treatments of major cardiac diseases.
Cardiac catheterization is a fundamental medical procedure used to diagnose and treat cardiovascular disease, including heart attack and stroke, the number one killer of men and women in the United States. Cardiac catheterization is a technically difficult procedure, requiring the skills of experienced medical physicians. Physicians are often faced with anatomical challenges, making it difficult to successfully execute cardiac catheterizations. In order to successfully complete the procedure, the equipment must traverse tortuous arteries and anatomical anomalies in order to reach the heart (e.g. tortuous subclavian arteries in trans-radial cardiac catheterization; tortuous iliac arteries in trans-femoral cardiac catheterization). Thus, there is a significant need for improved catheter design that overcomes such challenges without compromising medical benefit.

Application area

Cardiac catheterization (trans-radial and trans-femoral)

Advantages

Ease of design can be manufactured into every cardiac catheter
Faster, more efficient catheterization procedure
Facilitates treatment and diagnosis of more patients
Less damage to arteries and surrounding tissues, shortening recovery time
Easier for physicians to manipulate
Affords a market advantage particularly in trans-radial procedures

Institution

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