

Title (en)
A METHOD AND SYSTEM FOR PRESSURE BASED MEASUREMENTS OF CFR AND ADDITIONAL CLINICAL HEMODYNAMIC PARAMETERS

Title (de)
VERFAHREN UND VORRICHTUNG ZUR AUF DRUCK BASIERENDER MESSUNG DER CORRONAREN FLUSSRESERVE UND ZUSÄTZLICHER KLINISCHER HÄMODYNAMISCHER PARAMETER

Title (fr)
PROCEDE ET SYSTEME POUR EFFECTUER DES MESURES, BASEES SUR LA PRESSION, DE LA RESERVE CORONARIENNE ET D'AUTRES PARAMETRES HEMODYNAMIQUES CLINIQUES

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Abstract (en)
[origin: WO0053081A1] The present invention relates to intravascular pressure measurement based devices and methods determining clinical parameters related to stenosis severity for improved clinical diagnosis and treatment of cardiovascular disease in blood vessels or tubular conduits. More specifically, the invention provides methods for the determination of the clinically significant well known Coronary Flow Reserve (CFR) parameter-previously acquired by velocity measurement devices. In addition Coronary Flow Reserve in the same vessel without stenosis may be estimated and uses to select the necessary medical treatment. Additional pressure based clinical parameters, Diastole to Systole Velocity Ratio (DSVR) and Fractional Flow Reserve (FFR) in stenotic blood vessel during intervention (using only pressure measurements across stenosis) may also be calculated simultaneously, with the same set of interventional devices. Correlation of CFR with these parameters (e.g. FFR) may be further used to estimate the stenosis severity, downstream stenosis and the condition of the vascular bed or conditions related to aneurysms. It is known that there is a correlation between CFR and FFR for healthy vascular bed. Too low value of CFR for given FFR indicates either downstream flow restriction or insufficient infusion of vasodilator. Too high value of CFR for given FFR indicates vascular bed disease.

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