Supplementary material.

We want to highlight that most of the following coronary indices are develop under the assumption that pressure in venous sinus (Pv) is ≈ 0 mmHg. Herein, we present their calculations using direct coronary measures. For some indices, we also expressed as a function of other coronary indices, in order to improve the understanding of these indices.

- Coronary Flow (Q_{cor})[12]

Q_{cor} was calculated using Tmn as follows:

$$Q_{cor} = 1 / Tmn$$

In addtition, Q_{cor} can be calculated at rest or at maximal hyperemia to determinate resting or hyperemic Q_{cor}

$$_{rest}Q_{cor} = 1 / {}_{rest}Tmn \quad {}_{hyp}Q_{cor} = 1 / {}_{hyp}Tmn$$

Depending on the units to express the flow, the second term of the prior equation has to be multiplied by 1 mL or by 10^{-3} L to obtain mL/s or L/s or multiplied by 1 mL × [60 s / 1 min] or by 10^{-3} L × [60 s / 1 min] to obtain mL/min or L/min:

$$Q_{cor}\,(mL/s) = [1 / Tmn\ (s)] \times 1\ mL$$

$$Q_{cor}\,(L/s) = [1 / Tmn\ (s)] \times 10^{-3}\ L$$

$$Q_{cor}\,(mL/min) = [1 / Tmn\ (s)] \times 1\ mL \times [60\ s / 1\ min]$$

$$Q_{cor}\,(L/min) = [1 / Tmn\ (s)] \times 10^{-3}\ L \times [60\ s / 1\ min]$$

- Fractional Flow Reserve (FFR)[13,14]

FFR was calculated at maximal hyperemia as follows:

$$FFR = {}_{hyp}Pd / {}_{hyp}Pa$$

- Ratio Distal Coronary Pressure / Aortic Pressure (Pd/Pa)[13,14]

Pd/Pa was calculated at rest as follows:

$$Pd/Pa = {}_{rest}Pd / {}_{rest}Pa$$

- **Index of Microcirculatory Resistance (IMR)**[15]

IMR was calculated at maximal hyperemia as follows:

$$IMR = {}_{hyp}Pd \times {}_{hyp}Tmn$$

- Coronary Flow Reserve (CFR)[16,17]

CFR was calculated using Tmn values at rest and under maximal hyperemia as follows:

$$CFR = {}_{rest}Tmn / {}_{hyp}Tmn$$

- **Resting Full-Cycle Ratio (RFR)**[18]

RFR was obtained from Coroventis Coroflow system. RFR was calculated at rest and defined as:

$$RFR = \text{Lowest value of } {}_{rest}Pd / {}_{rest}Pa \text{ during the whole cardiac cycle}$$

- Corrected IMR (IMR_{corr})[19]

Corrected IMR was calculated at maximal hyperemia, using the Yong's formula, as follows:

$$IMRcorr = {}_{hyp}Pa \times {}_{hyp}Tmn \times [(1.35 \times {}_{hyp}Pd / {}_{hyp}Pa) - 0.32$$

- Resistive Reserve Ratio (RRR)[20]

RRR was calculated using CRF values as well as Pd at rest and under maximal hyperemia as follows:

$$RRR = ({}_{rest}Tmn / {}_{hyp}Tmn) \times ({}_{rest}Pd / {}_{hyp}Pd) = CFR \times ({}_{rest}Pd / {}_{hyp}Pd)$$

- Total Coronary Resistance (R_{Total})[7]

R_{Total} was calculated at maximal hyperemia and expresssed in Wood units or mmHg/L/min as follows:

$$R_{Total}\ (WU) = {}_{hyp}Pa\ (mmHg) / {}_{hyp}Q_{cor}\ (L/min)$$

- Epicardial Coronary Resistance (R_{Epi})[7]

R_{Epi} was calculated at maximal hyperemia and expresssed in Wood units or mmHg/L/min as follows:

$$R_{Epi}\ (WU) = ({}_{hyp}Pa - {}_{hyp}Pd)\ (mmHg) / {}_{hyp}Q_{cor}\ (L/min)$$

- Microvascular Coronary Resistance (R_{Micro})[7]

R_{Micro} was calculated at maximal hyperemia and expresssed in Wood units or mmHg/L/min as follows:

$$R_{Micro}\ (WU) = {}_{hyp}Pd\ (mmHg) / {}_{hyp}Q_{cor}\ (L/min)$$