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ADENOSINE AND ATP STRESS OF FRACTIONAL FLOW RESERVE EVALUATION OF CORONARY ARTERY DISEASE

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Objectives To compare fractional flow reserve (FFR) obtained during maximal hyperaemia by Intravenous (IV) ATP and adenosine.

Methods 23 patients with 25 lesions underwent determination of FFR with both IV adenosine and ATP. Adenosine and ATP was intravenously administered as a continuous infusion at a rate of 140 and 180 µg/kg/min until the lowest FFR was achieved.

Results Mean percent stenosis was 71%±5.97% (range 61% to 83%), mean FFR (IV adenosine) was 0.816±0.04 (range 0.75 to 0.89), and mean FFR (IV ATP) was 0.814±0.04 (range 0.75 to 0.89). There was a strong and linear correlation between FFR measured with IV adenosine and ATP ($R=0.974$, y (FFR by IV adenosine) = $0.967 \times (\text{FFR by IV ATP}) + 0.029$, $P<0.001$).

Conclusions IV ATP is equivalent to IV adenosine for the determination of FFR.