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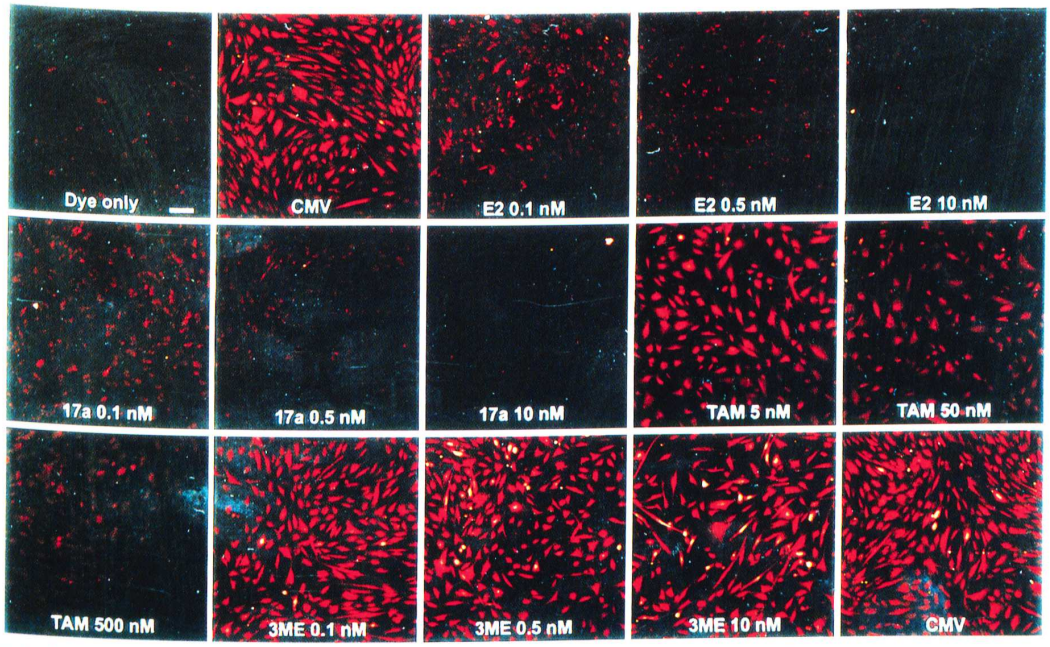

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Brief Rapid Communications

Clinical Investigation and Reports*

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Basic Science Reports

Images in Cardiovascular Medicine

The cover figure is from the article in this issue by Speir et al. Figure 1: SMCs were pretreated for 1 hour with indicated doses of E_2, 17α-E_2 (17a), 3-ME, or tamoxifen (TAM). Cells were then infected for 1 hour with CMV at 5 MOI, followed by addition of DCFH-DA fluorescent dye. Both stereoisomers of estradiol and tamoxifen, but not 3-ME, dose-dependently inhibited fluorescence, as determined by confocal laser microscopy. See page 2990.

Percutaneous Coronary Intervention in the Current Era Compared With 1985–1986

The National Heart, Lung, and Blood Institute Registries

David O. Williams, MD; Richard Holubkov, PhD; Wanlin Yeh, MS; Martial G. Bourassa, MD; Mahdi Al-Bassam, MD; Peter C. Block, MD; Paul Coady, MD; Howard Cohen, MD; Michael Cowley, MD; Gerald Dorros, MD; David Faxon, MD; David R. Holmes, MD; Alice Jacobs, MD; Sheryl F. Kelsey, PhD; Spencer B. King III, MD; Richard Myler, MD; James Slater, MD; Vladimir Stanek, MD; Helen A. Vlachos, MS; Katherine M. Detre, MD, DrPH; for the Coinvestigators

Background—Although refinements have occurred in coronary angioplasty over the past decade, little is known about whether these changes have affected outcomes.

Methods and Results—Baseline features and in-hospital and 1-year outcomes of 1559 consecutive patients in the 1997–1998 Dynamic Registry who were having first coronary intervention were compared with 2431 patients in the 1985–1986 National Heart, Lung, and Blood Institute Registry. Compared with patients in the 1985–1986 Registry, Dynamic Registry patients were older (mean age, 62 versus 58 years; $P<0.001$) and more often female (32.1% versus 25.5%; $P<0.001$). In the Dynamic Registry, procedures were more often performed for acute myocardial infarction (22.9% versus 9.9%; $P<0.001$) and treated lesions were more severe (84.5% versus 82.5% diameter reduction; $P<0.001$), thrombotic (22.1% versus 11.3%; $P<0.001$) or calcified (29.5% versus 10.8%; $P<0.001$). Stents were used in 70.5% of Dynamic Registry patients, whereas 1985–1986 patients received balloon angioplasty alone. Procedural success was higher in the Dynamic Registry (92.0% versus 81.8%; $P<0.001$) and the rate of in-hospital death, myocardial infarction, and emergency coronary bypass surgery combined was lower (4.9% versus 7.9%; $P=0.001$) than in the 1985–1986 Registry. The 1-year rate for CABG was lower in the Dynamic Registry (6.9% versus 12.6%; $P<0.001$).

Conclusions—Although Dynamic Registry patients had more unstable and complex coronary disease than those in the 1985–1986 Registry, their rate of procedural success was higher whereas rates of complications and subsequent CABG were lower. Results of percutaneous coronary intervention have improved substantially over the past decade. (***Circulation*. 2000;102:2945-2951.**)

Key Words: angioplasty ■ coronary disease ■ arteries ■ balloon ■ stents

In 1979, the National Heart, Lung, and Blood Institute (NHLBI) established a voluntary registry to characterize coronary angioplasty, at the time an emerging technique of percutaneous coronary revascularization.[1] Patients were enrolled from 1977–1980 and subsequently from 1985–1986. These 2 registries provided the first comprehensive description of technical and clinical results, and in the mid-1980s identified that angioplasty had matured to the point that clinical trials were necessary to resolve the genuine dilemma as to potential comparability to CABG.

See p 2910

These trials, including Bypass Angioplasty Revascularization Investigation (BARI)[2] and EAST,[3] found that in most patients with multivessel coronary artery disease (CAD), balloon angioplasty did not compromise survival and proved to save costs slightly relative to CABG but many patients who received PTCA required repeat revascularization. Since that time, new devices have been developed as potential adjuncts or replacements for the balloon catheter.[4] Although

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Additional coinvestigators are listed in the Appendix.

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