

wrongly) some security against malpractice suits. They kept medicine in perspective and had more balance in their lives.

#### SOME SKILLS TO INCREASE HAPPINESS

To be happier and more effective, physicians need to develop a set of skills that are not usually taught in medical school.

*Set realistic goals.* If you expect that you can prevent diabetic nephropathy in every patient, you are setting yourself up for failure, since many aspects of patients' care and compliance are beyond your control.

*Listen before speaking.* Many physicians fail to listen when proposing a treatment plan. Active listening can increase satisfaction for the patient and physician by creating a closer bond between them.

*Negotiate.* Physicians need to foster partnerships with their patients and share responsibility so that responsibility for treatment and care is not all on their shoulders. This mutual negotiation can also improve a patient's motivation to do the things that are in his or her own best interests.

*Learn time management skills.* Set boundaries on how many hours you work and do not always let the demands of medicine crowd out everything else. Time management also applies at the level of the patient encounter. If you can negotiate an agenda up front (as Beckman and Frankel suggest),<sup>8</sup> you can get more control of that 10- or 15-minute clock.

*Take care of yourself.* Physicians are terrible at this. Dispel the myth of the iron man and superwoman. Learn how to become a team player rather than going it alone. Support is particularly vital in coping with mistakes and with complicated patients.

In addition to these inner adjustments, physicians must pay attention to the institutions where they work. They must examine the values that are communicated and cultivated at their office and hospital. A healthy work environment includes respect for the personal experiences and needs of workers instead of just treating them as objects to be moved around. Staff and colleagues should be encouraged to seek help for problems, rather than be made to feel shame and humiliation.

To improve their sense of satisfaction, physicians must accept responsibility for their own happiness and not simply blame Congress or the insurance companies. These two institutions introduce many hassles into physicians' lives, but we cannot give them too much power over us. By working on skills

that foster relationships and that strengthen self-care skills and by creating work environments that are supportive and respectful, we can create a real health care revolution. We cannot change the entire system all at once. But we can confront these issues within our own practices, our own departments, and in our own exam rooms. In humanizing care for patients and their families, we rehumanize ourselves.

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## CARDIOVASCULAR DISEASE IN RENAL FAILURE: RISK ASSESSMENT, SCREENING, TREATMENT

**E**ND-STAGE RENAL DISEASE (ESRD) imposes an extremely high death rate, approximately half of which is due to cardiovascular disease. Studies with relatively small numbers of patients are elucidating the clinical factors that identify ESRD patients at highest risk of cardiovascular disease and are suggesting possible strategies for intervention. Nevertheless, this work is still in its infancy, and much remains to be done. Poignantly, because of the high risk in this population, studies need not be large to demonstrate statistically significant results.

#### A LARGE POPULATION AT HIGH RISK

According to the United States Renal Data System, the US population of approximately 240 000 ESRD patients is growing by about 9% annually, as

60 000 new patients enter ESRD and 40 000 die each year.<sup>1</sup> The mortality rate in ESRD is 25% in the first year and 23% in the second year, a rate that exceeds that for colon cancer. Young patients fare better than the elderly: the mortality rate in ESRD patients older than 70 years is 50% in the first year.

The population of patients with ESRD is getting older—and sicker. The average age of patients beginning dialysis is now 65 years, and an increasing number have renal disease caused by diabetes mellitus. At present, diabetes causes more than 35% of cases of ESRD but is expected to cause 50% by the turn of the century. Other causes of ESRD are hypertension (accounting for 29%), glomerulonephropathy (12%), cystic kidney disease (3%), interstitial nephritis (3%), obstructive nephropathy (2%), collagen vascular disease (2%), and acquired immunodeficiency syndrome (0.5%).

#### RISK FACTORS

Patients with ESRD have a high prevalence of traditional cardiovascular risk factors: nearly 50% have diabetes, 80% to 90% have hypertension, and more than half have left ventricular hypertrophy. Relatively few have elevated total cholesterol levels; the average was 178 mg/dL in one study.<sup>2</sup> These investigators found the best predictors of cardiovascular events were a history of previous events and an elevated lipoprotein(a) level. Other investigators have found that ESRD patients have higher levels of homocysteine,<sup>3</sup> an observation that offers some hope for intervention, as homocysteine levels can be lowered with large doses of folate. In other studies, congestive heart failure boded particularly ill for survival,<sup>4</sup> and ventricular hypertrophy was worse than dilated cardiomyopathy.<sup>5</sup> As left ventricular mass increased, so did the mortality rate.

#### SCREENING TESTS FOR CORONARY ARTERY DISEASE

There are two reasons to screen for coronary artery disease in ESRD patients: because of clinical symptoms or to exclude coronary artery disease in a candidate for renal transplantation. In general, exercise tests are inappropriate, as fewer than 25% of ESRD patients can achieve adequate exercise levels. Of the resting (pharmacologic) stress tests, dipyridamole thallium imaging may also be a poor choice. Researchers at the Cleveland Clinic found this test

had a sensitivity of only 37% and a specificity of 73% in patients with diabetes and uremia.<sup>6</sup>

Other Cleveland Clinic studies have found dobutamine echocardiography to have greater sensitivity and specificity and to be a reasonable tool to screen transplantation candidates.<sup>7</sup> This test has the added advantage of giving information about left ventricular anatomy and function as well.

#### TREATMENT ISSUES

The best option for ESRD patients is renal transplantation, particularly if a living-related donor can be found. Before surgery, patients without clinical risk factors such as diabetes, angina, smoking, electrocardiographic abnormalities, or advanced age (45 or 50 years in this population) can probably forego screening tests for coronary artery disease, as their operative risk of cardiac mortality is low.<sup>8</sup> All other transplantation candidates should undergo dobutamine echocardiography and, if indicated, coronary angiography and coronary revascularization.

For reasons not yet understood, ESRD patients undergoing percutaneous transluminal coronary angioplasty (PTCA) suffer high rates of complications, restenoses, and deaths.<sup>9</sup> Therefore, coronary artery bypass grafting may be a better option than PTCA in these patients.

There is only preliminary evidence that ESRD patients who are not transplantation candidates and who have coronary artery disease will have a lower mortality rate if they undergo coronary artery bypass grafting than if they do not.

It is appropriate to correct anemia in ESRD patients with erythropoietin, as this therapy appears to improve left ventricular function.

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