

- J Med 2000;343:180-184.
65. Bakers CS, Wragg A, Kumar S et al. A rapid protocol for the prevention of contrast induced renal dysfunction: the RAPID study. *J Am Coll Cardiol* 2003;41:2114-2118
 66. Bagouri C, Colombo A, Violante A et al. Standard vs double doses of N acetylcysteine to prevent contrast agent associated nephrotoxicity. *Eur Heart J* 2004;25(3):206-11.
 67. Kapoor A, Kumar S, Gulati S, et al. The role of theophylline in contrast induced nephropathy: a case control study. *Nephrol Dial Transplant* 2002;17:1936-1941
 68. Bagshaw SM, Ghali WA. Theophylline for prevention of contrast-induced nephropathy: a systematic review and meta-analysis. *Arch Intern Med* 2005;165:1087-1093
 69. Weinstein J-M, Heyman S, Brezis M. Potential deleterious effect of furosemide in radiocontrast nephropathy. *Nephron* 1992;62:413-415.
 70. Weisberg LS, Kurnik PB, Kurnik BRC. Risk of radiocontrast nephropathy in patients with and without diabetes mellitus. *Kidney Int* 1994;45:259-265
 71. Kurnik BR, Allgren RL, Genter FC, Solomon RJ, Bates ER, Weisberg LS. Prospective study of atrial natriuretic peptide for the prevention of radiocontrast-induced nephropathy. *Am J Kidney Dis* 1998;31: 674-680.
 72. Stone GW, McCullough PA, Tumlin JA, et al. Fenoldopam mesylate for the prevention of contrast-induced nephropathy: a randomized controlled trial. *JAMA* 2003;290:2284-2291.
 73. Wang A, Holcslaw T, Bashore TM, et al. Exacerbation of radiocontrast nephrotoxicity by endothelin receptor antagonism. *Kidney Int* 2000;57:1675-1680.
 74. Sketch MH Jr, Whelton A, Schollmayer E, et al. Prevention of contrast media-induced renal dysfunction with prostaglandin E₂: a randomized, double-blind, placebo-controlled study. *Am J Ther* 2001;8:155-162.
 75. Khotiry Z, Schlicht JR, Como J, et al. The effect of prophylactic nifedipine on renal function in patients administered contrast media. *Pharmacotherapy* 1995;15:59-65.
 76. Gupta RK, Kapoor A, Tewari S, Sinha N, Sharma RK. Captopril for prevention of contrast-induced nephropathy in diabetic patients: a randomised study. *Indian Heart J* 1999;51:521-526.
 77. Spargias K, Alexopoulos E, Kyrzopoulos S, et al. Ascorbic acid prevents contrast-mediated nephropathy in patients with renal dysfunction undergoing coronary angiography or intervention. *Circulation* 2004;110:2837-2842. [Erratum, *Circulation* 2005;111:379.]
 78. Vogt B, Ferrari P, Schonholzer C et al. Prophylactic hemodialysis after contrast media in patients with renal insufficiency is potentially harmful. *Am J Med* 2001;111:692-8.
 79. Heyman SN, Reichman J, Brezis M. Pathophysiology of radiocontrast nephropathy: a role for medullary hypoxia. *Invest Radiol* 1999;34:685-691.
 80. Marenzi G, Marana I, Lauri G et al. The prevention of radiocontrast-agent-induced nephropathy by hemofiltration. *N Engl J Med* 2003;349:1333-1340.
 81. Donnelly PK, Burwell N, Mc Burney A et al. Clearance of iopamidol, a non ionic contrast medium, by CAPD in patients with end stage renal failure. *Br J Radiol* 1992;65:1108-1113.
 82. Marx MA, Shuler CL, golper TA. Plasma Iohexol clearance in automated peritoneal dialysis-its role in adequacy determination. *Peritoneal dial Int* 1998;18:512-515
 83. Barrett BJ, Carlisle EJ. Metaanalysis of the relative nephrotoxicity of high- and low-osmolality iodinated contrast media. *Radiology* 1993;188:171-178.

LITERATURE REVIEW

VASCULAR ERECTILE DYSFUNCTION IN CHRONIC RENAL FAILURE

Guido, Vincenzo and Domemico

Semin Nephrol 26:42-45

The prevalence of erectile dysfunction (ED) has increased dramatically worldwide in parallel with the aging of the population. In 1995, ED was estimated to be present in more than 150 million men. Considering population aging in Western Countries, estimates predict that more than 300 million men will be affected by ED by the year 2025. ED is a common and often distressing side effect of renal failure. It is present 30% of patients with chronic renal failure and in 50% of patients undergoing dialysis treatment. Uremic men of different ages report a high variety of sexual problems including sexual hormonal pattern alterations, reduced or loss of libido, infertility, and impotence, thereby influencing their well-being. The release of sildenafil citrate, the relationship between ED and the presence of cardiovascular disease (CVD) has been evaluated in several studies. Many of the risk factors for ED are the same as those for cardiac disease. CVD and ED are closely interrelated disease processes. Indeed, ED can be considered a symptom of vascular endothelial damage. Therefore, it can be expected that impotence will appear along with CVD, and the presence of ED suggests the existence of CVD. An accurate evaluation of sexual histories of all men who present to internists, cardiologists, and also nephrologists for early detection of ED may allow for early diagnosis and management of CVD.

LITERATURE REVIEW

Diuretic Use, Residual Renal Function, and Mortality Among Hemodialysis Patients in the Dialysis Outcomes and Practice Pattern Study (DOPPS)

Jennifer L. Bragg-Gresham, Rachel B. Fissell, Nancy A. Mason et al. *Am J Kidney Dis* 49:426-431, 2007.

The role of diuretics in the management of hemodialysis (HD) patients has not been clearly defined, and guidelines for their use in patients with end-stage renal disease (ESRD) do not exist. Use of diuretics was shown to increase urine volume and sodium and potassium excretion in patients on continuous ambulatory peritoneal dialysis therapy. Management of volume status with may reduce the risk of fluid overload and minimize episodes of hypotension during dialysis. In addition, improved overall fluid balance could slow the development of cardiovascular disease and minimize complications of existing cardiovascular disease. The larger urine volume that accompanies diuretic use in both continuous ambulatory peritoneal dialysis and HD patients may allow for a more liberal fluid intake and perhaps allow for a more liberal diet, thus facilitating improved nutrition.

Diuretic use was investigated in 16,420 hemodialysis patients from the Dialysis Outcomes and Practice Patterns Study, a prospective observation of hemodialysis patients selected from nationally representative facilities on 3 continents. Logistic regressions were used to investigate associations between diuretic use and patient characteristics. Outcomes of interdialytic weight gain, increased serum potassium and phosphorus levels, and odds of RRF after 1 year were investigated. Cox regression was used to analyze the association between mortality and diuretic use. Facility diuretic use varied substantially from 0% to 83.9% of patients. Diuretic use decreased sharply after the start of dialysis therapy. Loop diuretic use ranged from 9.2% in the United States to 21.3% in Europe. Where use within 90 days of starting dialysis therapy ranged from 25.0% in the United States to 47.6% in Japan. Diuretic use was associated with lower interdialytic weight gain and lower odds of hyperkalemia (potassium > 6.0 mmol/L). Patients with RRF on diuretic therapy had almost twice the odds of retaining RRF after 1 year in the study versus patients not on diuretic therapy. Patients administered diuretic had a 7% lower all-cause mortality risk (p=0.12) and 14% lower cardiac-specific risk (p=0.03) versus patients not administered diuretics.

Variation exists in facility practices of diuretic use. In patients with RRF, there may be benefit associated with continuing diuretic use rather than automatically discounting diuretic therapy at dialysis initiation.