acute administration of ascorbic acid in larger doses may have potential hazards in generating larger amount of free radicals.

The study has demonstrated that NO involves the dilator mechanism of acetylcholine, while ascorbic acid still has an insigniﬁcant dilator effect in the presence of L-NMMA (compared with L-NMMA alone). Whether the action of vitamin C promotes the bioactivity of endogenous NO is not known here. Furthermore, acidiﬁcation was known to augment NO-mediated relaxation in rat artery [4]. Large dose infusion of ascorbic acid, with low pKₐ of 4.2, might overload the buffer system in the local uremic vascular milieu. This dilator effect may act possibly through the acidosis of the biologic system.

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REFERENCES


Proteinuria dipstick test: Is it time to change?

To the Editor: In their recent paper published in Kidney International, Iseki et al [1] demonstrated that proteinuria, assessed by dipstick urinalysis, is an independent risk factor of end-stage renal disease (ESRD) in a mass screening setting. Sensitivity of dipstick for proteinuria is low (albumin >250 mg/L), and the cost for each strip is United States dollars $0.71. The correct evaluation of proteinuria requires a timed urine collection or, alternatively, the use of the protein:creatinine ratio (P/C) on spot-morning urine [2, 3]; the cost of reagents for P/C is United States dollars $0.34.

We compared the data obtained from the analysis of 24-hour proteinuria, of the P/C, and of the dipstick test in 297 patients with different kidney diseases, proteinuric or not. We found a good correlation between the values of 24-hour proteinuria and P/C (R = 0.82), and a lower correlation between 24-hour proteinuria and dipstick test (R = 0.75), and between P/C and dipstick test (R = 0.72). In 54 patients (18.2%) the dipstick resulted negative; by contrast, both of the other methods showed a pathologic proteinuria.

In our experience the P/C is a reliable estimation of the 24-hour proteinuria, more sensitive than dipstick.

We conclude that P/C is a feasible, sensitive, low in cost, simple test. Actually, in industrialized countries, this test should be considered for a mass health screening in order to detect early signs of ESRD and to allow appropriate renoprotective treatments [4].

Furthermore, the P/C should be performed routinely in selected settings for detecting low increases of proteinuria otherwise not revealed by dipstick test.

MASSIMO GAI, DARIO MOTTA, VINCENZO CANTALUPPI, FABRIZIO FOP, ALBERTO JEANTET, GIUSEPPE P. SEGOLONI, GIORGINA B. PICCOLI, and GIACOMO LANFRANCO Torino, Italy


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3. STEINHAUSLIN F, WAUTERS JP: Quantitation of proteinuria in kidney

Reply from the Authors

We appreciate the comments from Dr. Gai et al concerning the method of detecting proteinuria. A major finding of our paper was that the degree of proteinuria shown by dipstick urinalysis was strong as a predictor of developing end-stage renal disease (ESRD) [1]. We have recently analyzed the effect of blood pressure on developing ESRD in the same registry [2]. Comparing the two papers, we learned that the relative strength of the degree of dipstick proteinuria (−) to (1+) was similar to that of different levels of blood pressure. Therefore, slight proteinuria from (±) to 1+ is equally important as that of mild to moderate hypertension. Although the cumulative incidence of ESRD was low as less than 10 per 1000 screennees in 17 years.

The mass-screening registry, which was done in 1983 used the dipstick urine test (Ames) for detecting proteinuria. We admit that the sensitivity of dipstick for proteinuria is lower than that of measuring the protein:creatinine (P/C) ratio. However, this method was not fully established during the early 1980s. In Japan, public support for the dipstick urine test was started in 1974 for elementary and junior high school students [3]. There is no evidence to prove the utility of urine test for preventing either ESRD or the urinary tract malignancies by mass screening [4]. According to the 2001 annual report of the Japanese Society for Dialysis Therapy, the mean age at start of dialysis was 63.8 years, and the acceptance rate was more than 250 per million population [5]. Chronic glomerulonephritis as a primary cause of ESRD has not increased since 1995. We believe that widespread use of a screening test from school children to aged population may have played a role, at least partly, in this phenomenon. Screenees with dipstick positive proteinuria (≥2+) are at high risk of developing ESRD [1].

The current cost of dipstick urine test, including both proteinuria and other tests such as hematuria, ketones, glucosuria, specific gravity, and pH, is 280 yen ($2.3 United States dollars) in Japan.

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Where have all the lanthanum salts gone, long time passing?

To the Editor: The D’Haeze study [1] should be reassuring that one-year treatment of lanthanum carbonate heals bone diseases in dialysis patients.

However, no comparison is made between plasma lanthanum in the two groups of patients (lanthanum- or calcium-treated), as it is only written that “patients on the lanthanum group had plasma lanthanum levels slightly increased, with mean levels ranging from 0.51 to 1.08 μg/L,” and there was no relationship to the “dose administered.”

However, in previous works this “slight increase” was 10 to 25 times higher, from baseline 0.014 to 0.030 μg/L to 0.346 to 0.776 μg/L, in a dose-dependent fashion (Table 1), indicating the “existence of some degree of intestinal absorption.” [2]

Lastly, the sentence “...plasma lanthanum levels reached a plateau after 12 weeks” is worrying. Where has lanthanum gone? If biliary excretion is not greatly increased (to be demonstrated), it accumulates into tissues. The authors wrote that “in light of the past tragic experience with aluminium ... information on the effect of lanthanum carbonate on bone is necessary,” but they concluded that the five-fold increase in patient bone as compared with control (after one only year) is not of

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<th>Placebo group (N = 32)</th>
<th>Lanthanum group (N = 113)</th>
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<td>Lanthanum carbonate dose (mg/day)</td>
<td>Blood lanthanum levels at the end of the study (μg/L)</td>
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<tr>
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