with a dispersion of 2 ± 2.1 mL/min/1.73 m² and a GFR variability of 0.6 ± 0.6%. This analysis was completed with a Bland-Altman plot to see the correlation between the dispersion and the MDRD-4 equation using 2 decimals. The dispersion increases as the GFR increases ($r = 0.128$, $p < 0.001$), even in patients with CRD ($r = 0.427$, $p < 0.001$). The dispersion was not affected either by age or sex (data not shown). For the sCr values the dispersion shows a saw-like hyperbolic curve associated to the approach with one decimal of the sCr, similar to that described for the GFR and sCr levels, so that for sCr values < 1.5 mg/dL the decrease of the dispersion is exponential.

The diagnosis of HRD defined by a GFR < 60 mL/min/1.73 m² and normal sCr values (for women < 1.2 mg/dL and for men < 1.3 mg/dL) was made in 320 patients when two decimals were employed (50%), and in 253 (39.5%), when only one decimal was employed, with a decrease of 26%. Among women, 288 (65.3%) were diagnosed with HRD with 2 decimals and 251 (56.9%) with one decimal, that is a decrease of 15%; while among men, 32 (16.1%) were diagnosed with 2 decimals and 2 (1%) with one decimal, that is a decrease of 1.500%.

Our results are obtained from a not selected population from Primary Health Care, with a prevalence of CRD that is similar to that found in randomized studies performed on the general population[2] and is coherent with previous data from our area.[3] The study shows that although there is a close relation between the results of the GFR using one or two decimals, the use of one decimal overestimates the prevalence of CRD by 9% and underestimates the prevalence of HRD by 26%. These differences highlight the importance of following the recommendations when performing studies in this field.

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Use of vascular polyurethane-urea prosthesis of the of the vectra type in a hemodialysis unit

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To the editor: The internal native arteriovenous fistula (IAVF) is the elective vascular access in patients with chronic renal failure on hemodialysis.[1] In case that the performance of a native access is impossible due to difficulties with the vascular bed, the vascular grafts constitute an efficacious alternative.[2]

The new polyurethane-urea prosthesis of the VECTRA type has a stiffer wall than those composed of polytetrafluorethylene (PTFE).[3-5] This characteristic allows using it within the first days after placement, avoiding so the use of temporary catheters and their potential complications.[6-8]

In the last two years the VECTRA prosthesis have been employed in our Hemodialysis Unit in those patients with absent or difficult vascular access, who needed hemodialysis in the short term. We briefly describe our experience with the use of this type of vascular prosthesis, as well as their main characteristics, the evolution and the complications associated to their use.

Between January of 2005 and March of 2007 a total of 7 VECTRA prosthesis were placed in 6 patients (50% males), mean age 56.1 years and mean time on hemodialysis 98.6 months. The most frequent etiology of the ESRD was diabetes mellitus in 2 patients (33%). Other underlying conditions were high blood pressure (100%), ischemic heart disease and peripheral vascular disease (66%), and diabetes (33%). Mean Charlson's index was 7. In each patient the mean number of previous vascular access was 4.2 (32% IAVF, 32% temporary catheters, 20% funneled catheters, and 16% PTFE prosthesis). VECTRA prostheses were mainly placed at the femoral level in 42% of the cases. Mean time for the first puncture was 10.4 days, and the initial puncture was performed within the first 96 hours of graft placement in 58% of the cases. The following complications were registered: one serious hematoma during initial puncture, 6 thromboses of the prosthesis (85%), in 3 patients being immediate (first 7 days), and 1 pseudoaneurysm (14%) as a late complication. A surgical thrombectomy was performed that was effective, and 2 temporary catheters were placed to treat the complications. Only one prosthesis works to date, the mean working time of the thrombosed grafts being 30.5 days (5 cases). One patient received a renal transplant from a cadaver donor, which is still functioning, and during the study period 5 patients died from causes not related to the vascular access.

In our limited experience, the use of VECTRA type prosthesis allowed hemodialysis within the first days after placement in more than half of the cases, but early thrombosis was the most important complication with this type of prosthesis. With these results, the placement of these grafts should be limited to patients with no native IAVF because of difficult vascular accesses, who require not urgent short-term renal replacement therapy.

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Graves disease, drug-related hypothyroidism, and nephrotic syndrome due to minimal changes disease

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To the editor: A few cases of glomerular diseases associated to thyroid diseases have been described.[1-6]

A 41-year old female went to the General Practitioner because of malaise and palpitations. On blood analysis, we only detected abnormal free T4 (fT4) (100 pmol/L) and TSH (0.01 mIU/mL) values (normal fT4 levels: 12-22 pmol/L and normal TSH levels 0.3-4.2 mIU/mL), compatible with hyperthyroidism. A Doppler ultrasound of the thyroid showed a homogeneous increase in size and diffuse increased uptake with signs of hypervascularization. A diagnosis of Graves-Basedow's disease was made and symptomatic treatment with beta-blockers and synthetic antithyroid drugs (methimazole) was initiated.

One month later she went to the hospital because of asthenia, generalized edemas and anasarca, and intolerance to cold. Blood analysis disclosed hypoalbuminemia (14.9 mg/dL) and hypercholesterolemia (350 mg/dL) with normal renal function. Urinary sediment did not show activity signs. A proteinuria of 6.5 g/day was detected. The diagnosis was oriented to pure nephrotic syndrome, as well as iatrogenic hypothyroidism due to excessive doses of anti-thyroid drugs. Treatment was initiated with levothyroxine, ACE inhibitors, diuretics and statins. The immunological investigations (including immunoglobulin levels, complement fractions, cryoglobulins, ANA, ANCA and anti-basement membrane antibodies), viral serology (HBV, HIV, HCV), and tumoral markers (AFP, CEA, Ca 12.5, Ca. 15.3, Ca 19.9) were unremarkable. A percutaneous renal biopsy was performed, which showed glomeruli with no hypercellularity, no alterations in the capillary wall, no tubular atrophy, no significant inflammatory infiltrate and negative immunofluorescence, compatible with minimal changes disease. With the treatment, the evolution was rapidly favorable, the thyroid hormones recovered, the edemas disappeared, and the proteinuria completely regressed (0.16 g/day).

The most frequent thyroid condition associated to renal alterations is Graves' disease. The most frequently reported associated renal condition in these cases is membranous glomerulonephritis with nephrotic syndrome.[3,4] However, there are sporadic cases of membranoproliferative glomerulonephritis or minimal changes disease associated to thyroid disease.[1,5,6] Some authors suggest that the incidence of the association of glomerular alterations and thyroid conditions could be higher than suspected, since the presence of constant proteinuria is not infrequent when a diagnosis of autoimmune thyroiditis is made.[2] The coexistence of the two pathologies could be explained by a common autoimmune pathogenesis. On the other hand, nephrotic syndrome secondary to structural changes of the glomerular basement membrane and tubular membrane has been reported in cases of sustained hypothyroidism.[2,7-9] Given the temporal coincidence of the diagnosis and the nephrotic flare after the iatrogenic hypothyroidism, we think that in the reported patient the underlying thyroid disease provoked a glomerular alteration, which was maintained by the situation of hypothyroidism. Most patients are controlled with steroids or other immunosuppressive drugs, although therapy with iodine or radical thyroidectomy has been efficacious in those patients with repetitive flares.[10,11] Immunosuppressive therapy was not initiated in this patient because of the rapid improvement.

In summary, we report a patient who presented minimal changes disease associated to Graves' disease in the setting of pharmacological hypothyroidism. The infrequent association of both entities and the complete remission without immunosuppressive therapy are remarkable.

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