

**Table I. Results of the determination of anti-HBs antibodies in 8 patients with unexpected data at six months**

Id	Sex	Age 1 <sup>st</sup> vac.	First vac. Year	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8	
				Anti-Hbs		Anti-Hbs		Anti-Hbs		Anti-Hbs		Anti-Hbs		Anti-Hbs		Anti-Hbs		Anti-Hbs	
				12 mo.	6 mo.	12 mo.	6 mo.	12 mo.	6 mo.	12 mo.	6 mo.	12 mo.	6 mo.	12 mo.	6 mo.	12 mo.	6 mo.	12 mo.	6 mo.
1	H	72	1999	5	0	18	5	23	8	4	29	5.8	17	8.7					
2	V	79	2000	5	0	2	5	97	4.2	60	7.4	63.4							
3	V	84	2001	0	0	45.7	24.7	2.4	12.7	1.5	14								
4	V	38	2002	40	11.5	7.6													
5	H	50	2002	0	0.7	16	2.1	52.5	146	5.1	3.1								
6	V	52	2002	0	3.3	5	0	23.8	4										
7	H	69	2002	0	0.2	25.4	2.4	182	139	6.1	4.7								
8	H	83	2002	0	1	14.6	0.1	1.2	0	4.4									

benefit from a revaccination 6 months before the annual control.

In 7 patients (22.5%), the controls at six months after revaccination showed protective levels of antibodies, but at the annual control they already were below 10 mIU/mL. These results led to consider the patients as non-responders. Moreover, 3 of the 7 patients never had protective antibody levels on annual controls. Had not the controls at 6 months be performed, they would have been considered as non-responders to vaccination.

Antibody controls every 6 months disclose some patients that respond to vaccination but would not be detected only on annual controls. Besides, they help identifying a group of patients in whom the antibody levels have already diminished below 10 mIU/mL and could benefit from a semestral vaccination protocol.

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## Hidden chronic kidney disease. A matter of decimals

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**To the editor** The SEN recommends estimating the glomerular filtration rate (GFR) by means of the MDRD-4 equa-

tion, using the serum creatinine levels (sCr) approximated to 2 decimals if the units are mg/dL.<sup>1</sup>

We analyzed the impact on the prevalence of chronic renal disease (CRD) if one decimal is used instead of two decimals, as recommended. We calculated the systematic error and the dispersion (normal and absolute difference between the results of the MDRD-4 with the two approaches) and the inter-method variability by means of the relative difference (absolute difference divided by the mean of the GFR using the approaches multiplied by 100). We also analyzed the impact on the prevalence of hidden renal disease (HRD). We collected 8,967 consecutive blood analytical parameters from patients older than 18 years, requested from Primary Health Care. Through a personal code we identified 8,070 subjects (10.3% of the population of the area), with a mean age of 57.4 ± 18.8 years (range 18-107), of which 62.9% were women; and 40.7% were older than 65 years. If a patient had more than one determination done, we selected the lowest sCr value, to avoid the error attributed to acute renal failure.

By using sCr expressed with 2 decimals, we identified 640 people with GFR < 60 mL/min/1.73 m<sup>2</sup> (68.9% women), and the prevalence of CRD was 7.3%; whereas when the sCr value was expressed with one decimal, 699 people were identified (69.8% women) and the prevalence was 8%, which means an increment of 9%.

For the total population the mean bias was -0.3 ± 2.8 mL/min/1.73 m<sup>2</sup>,

with a dispersion of  $2 \pm 2.1$  mL/min/ $1.73$  m<sup>2</sup> and a GFR variability of  $0.6 \pm 0.6\%$ . 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/ $1.73$  m<sup>2</sup> 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<sup>2</sup> and is coherent with previous data from our area.<sup>3</sup> 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.<sup>1</sup> 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.<sup>2</sup>

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

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 con-

ditions 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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