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A) COMENTARIOS A ARTÍCULOS PUBLICADOS

Correlation versus agreement; protein/creatinine ratio in spot urine and 24-hour urine protein

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Dear Editor,

I read with interest the article by Montero et al.[1] in Nefrologia 2012;32(4):494-50. This was an interesting study assessing the correlation between protein/creatinine ratio and 24-hour urine protein excretion. The authors assessed the strength of correlation by measuring the intra-class correlation coefficient (ICC) and the Spearman correlation coefficient (SCC).

I would argue that although the authors did construct a Bland Altman Plot, they did not address the agreement between protein/creatinine ratio and 24 hour urine protein excretion exhaustively. Montero et al. report the 95% limits of agreement graphically in the Bland-Altman plot but not numerically. The authors focus on the use of intra-class correlation coefficient which is often used to assess measurement error and reliability. However this measure is influenced by the amount of variation between subjects.[2]

When measuring urinary protein excretion, all methods are extremely likely to be correlated because they will all be attempting to measure the same construct i.e. the amount of protein in the urine, and so assessing whether the two measurements are correlated is not necessarily very informative. What we are more interested in as clinicians is whether or not we can use the two methods interchangeably or the agreement.

The standard deviation of the differences between measurements made by urine protein/creatinine ratio and 24 hour urine protein excretion provides a good index of the comparability of the two methods.[2] This leads to the 95% limits of agreement between the two measurements. Although Montero et al. do report the 95% limits on the Bland-Altman plot, perhaps the authors could have reported the 95% limits of agreement for a specific number of thresholds of proteinuria for example <300mg, <3.5 grams or >3.5 grams individually which would be useful for clinicians trying to interpret spot urine protein/creatinine ratio. I worry that readers of this excellent study may be left focusing too much on correlations rather than agreement or concordance.

Conflict of interest

The authors declare that there is no conflict of interest associated with this manuscript.

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2. Bland M, ed. An Introduction to Medical Statistics. Third Edition. London: Oxford Press; 2009.

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Respuesta: Cociente proteína/creatinina en orina esporádica *versus* proteínas en orina de 24 horas

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Sr. Director:

Agradecemos al Dr. Donal sus valiosos comentarios[1], sobre los que hemos reflexionado con mucho interés. Está en lo cierto al reclamarnos la falta de detalle sobre información tan relevante como los datos numéricos del 95 % del intervalo de confianza del acuerdo mostrado en el gráfico de Bland-Altman. Los resultados para todas las muestras y para los umbrales específicos se detallan en la tabla 1. Los intervalos de confianza del 95 % en nuestro estudio son anchos, lo que refleja la gran variación de las diferencias que ya se objetivaba en el gráfico.

El Dr. Donal expresó ciertas dudas con respecto al uso del coeficiente de correlación intraclase (CCI) y el coeficiente de correlación de Spearman (CCS), dado que desde su punto de vista éstos evalúan la correlación en lugar de medir el acuerdo. Es cierto que la presencia de una fuerte correlación no implica que exista un fuerte acuerdo entre ambos métodos. En este sentido, resulta útil aclarar el concepto básico del CCI. El CCI mide un tipo de correlación, que evalúa la consistencia o la reproducibilidad de las mediciones cuantitativas realizadas por diferentes observadores o métodos de medición de la misma cantidad, o el acuerdo entre dos variables numéricas[2,3], por lo que en este estudio, tal y como se ha visto en estudios precedentes, parece adecuado que, además de mostrar los resultados del gráfico Bland y Altman, presentemos los resultados mediante este coeficiente. Así, creemos que, dado que los resultados del CCI están en concordancia con los obtenidos con el gráfico de Bland y Altman, el CCI puede añadir información adicional que ayude a interpretar los datos obtenidos. Sin embargo, tal y como se ha sugerido, en la carta aportamos los intervalos de confianza del 95 %, con la finalidad de clarificar los resultados.

Conflictos de interés

Los autores declaran que no tienen conflictos de interés potenciales relacionados con los contenidos de este artículo.

Tabla 1. Intervalos de confianza del 95 % en el gráfico de Bland-Altman

Proteinuria 24 h (mg)	Todos	< 300	300-3499	> 3500
n	159	60	77	22
Diferencia media	252,7	-10,9	-85,8	2156
Desviación estándar (DE)	1508	117	808	3208
Intervalo de confianza 95 % (diferencia media ± 2 DE)	(-2763, 3269)	(-245, 223)	(-1702, 1530)	(-4260, 8572)

1. Sexton D. Correlation versus agreement; protein/creatinine ratio in spot urine and 24-hour urine protein. Nefrologia 2013;33(1):134.
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Comment on "Membranous glomerulonephritis associated with mieloperoxidase antineutrophil cytoplasmic antibody-associated glomerulonephritis"

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Dear Editor,

We read with interest the report of Dr. Guang-Yu Zhou, about a case of Membranous Glomerulonephritis with crescentic transformation.[1] Acute crescentic transformation is a rare but well described event in patients with membranous glomerulonephritis.[2] The concomitant occurrence of a vasculitic glomerulonephritis and membranous nephropathy in the same patient is unusual.[3] We report herein our similar experience. A caucasic 66-year-old man presented for rapid declining of renal function. For nearly 10 years he was suffering from hypertension and for 4 years he is having paresthesias, muscle aches in the legs and significant reduction in muscle strength with an ataxic walking. This condition was interpreted as a mixed sensori-motor polyneuropathy. He performed therapy with prednisone and azatioprine, suspended for 1 year; six months before, laboratory tests showed a serum creatinine concentration 220μmol/L and a 24-h protein excretion 0,75g/d. On admission, the physical examination showed edema and severe hypertension; we detected a 24-h protein excretion 1.1g/d, Hb: 9.1g/dl, serum creatinine concentration 550.8μmol/L, the urinalysis 2 + urine protein and 1 + urine blood. ANCA determined in serum screening test by indirect immunofluorescence and other immunological tests, including anti-nuclear antibodies (ANAs), anti-Sm antibody, anti-dsDNA antibody, anti-cyclic citrullinated peptide (CCP) antibody, and anti-glomerular basement membrane (GBM) antibody were negative; serum complement and immunoglobulin levels were normal. Liver function tests and other routine parameters were within the normal range. There was no evidence of systemic lupus erythematosus (SLE), infection, malignancy. For the clinical suspicion of a vasculitis leading to renal and neurological involvement, we performed a kidney biopsy. In the light microscopic visualization of renal tissue, 11 out of 17 glomeruli were globally sclerotic; the remaining glomeruli showed: diffuse, global and marked thickening of capillary wall (Figure 1), focal and diffuse sub-epithelial vacuolation; global and segmental sub epithelial deposits with sub-epithelial spikes, formation of 11 crescents (n° 3 cellular crescents, n° 1 fibrocellular crescent and n° 7 fibrotic crescents (Figure 2). Immunofluorescence examination displayed granular deposition of IgG, kappa and lambda light chains and a strong, diffuse and global granular staining along the glomerular capillary (subepithelial) walls. Therefore renal histology and laboratory examinations supported diagnosis of membranous GN with crescentic overlap. We diagnosed a vasculitis ANCA-negative and the patient was treated initially with methylprednisolone pulse 125mg/d for 3 days followed by prednisone 50mg/d, and i.v. cyclophosphamide 0.25g once every 21 days. Because of no sign of improvement shown 2 months later, we stopped the cyclophosphamide therapy and the patient started chronic haemodialysis treatment. Several authors have reported acute crescentic transformation in patients with pri-

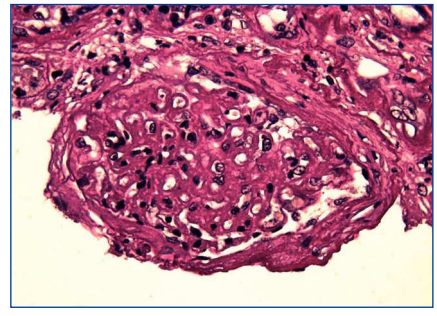

Figure 1. PAS stain shows global and prominent thickening of the glomerular basement membranes, in the absence of evidence of cellular proliferation (PAS, x 400).