Query About Validity of uVDBP as a Biomarker of Steroid-Resistant Nephrotic Syndrome

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Dear Editor,

I have read the research article entitled "Urinary Vitamin D-Binding Protein as a Biomarker of Steroid - Resistant Nephrotic Syndrome".[1] I want to congratulate the authors for this research article and I have a query that needs clarification.

In their valuable work, they found that: "Concentrations of uVDBP were significantly higher (*P*, .001) in patients with SRNS (13 659 ng/mL, interquartile range [IQR] 477-22 979) than in patients with SSNS (94 ng/mL, IQR 53-202)."

That was based on a study cohort of 52 patients; 24 had steroid-resistant nephrotic syndrome (SRNS) and 28 had steroid-sensitive nephrotic syndrome (SSNS). Out of the 28 patients who had SSNS, 18 patients (65%) were in remission and only 10 (35%) were in relapse at the time of urine sample collection to measure the urinary vitamin D-binding protein (uVDBP) levels. Having 18 out of 28 patients in remission could largely confound the results leading to lower uVDBP levels in the SSNS group compared to SRNS group. This could be interpreted by the resolution of proteinuria and subsequent decrease of urinary levels of proteins, for example, urinary albumin and VDBP. Having 18 patients in remission, in the SSNS group, could interpret why uVDBP values were lower in the SSNS group compared to the SRNS group rather than being a true marker of steroid resistance.

This was addressed later on by the authors who mentioned that "Subgroup analysis showed that while trending higher, VDBP was not significantly different between patients with SSNS with active proteinuria (203.7 ng/mL; IQR 39.7-717.9) and those in remission (42.1 ng/mL; IQR 15-144)." I would appreciate it if the level of statistical significance and the P-value of this finding had been mentioned because the values of the medians and the interquartile ranges look quite different between patients in remission (42.1 ng/mL; IQR 15-144) and those with active proteinuria (203.7 ng/mL; IQR 39.7-717.9) within the SSNS group.

Moreover, the correlation between the presence of proteinuria and uVDBP excretion was tested in the research article[1] and was found to be statistically significant ($R = .66$, $P < .001$). Based on that, this correlation can interpret why 65% of patients (18/28) in the SSNS group who were in remission have lower uVDBP levels. This could be due to remission of proteinuria rather than being a biomarker of SSNS as an outcome.

I will appreciate it if I can receive your valuable feedback about why lower uVDBP levels in the SSNS group was interpreted as being a possible biomarker of steroid resistance in the above-mentioned article but was not attributed to remission of proteinuria?

Since I am interested in the validity of uVDBP as a biomarker of steroid resistance in childhood nephrotic syndrome, your feedback is highly appreciated.

Author Contributions

Ahmed H. Aoun is the only contributor to the main conceptual ideas, drafting, critical revision, and final approval of this version.

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REFERENCE

1. Bennett MR, Pordal A, Haffner C, Pleasant L, Ma Q, Devarajan P. Urinary vitamin D-binding protein as a biomarker of steroid-resistant nephrotic syndrome. *Biomark Insights*. 2016;11:1-6.

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