Serum Alpha-1-Acid Glycoprotein Levels in Uremic Patients on Hemodialysis

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We have read with interest the report by Henriksen et al. [1] concerning serum alpha-1-acid glycoprotein in uremic patients on maintenance hemodialysis.

In a similar study [2], carried out on 31 patients dialyzed against Cuprophane membrane (mean time on dialysis: 51.5 months), we found comparable results. The serum alpha-1 -acid glycoprotein was measured by radial immuno-diffusion (M-Partigen alpha-1-acid glycoprotein, Istituto Behring), with normal values ranging from 55 to 140 mg/dl. The mean serum alpha-1-acid glycoprotein concentration was higher in our dialysis patients (117.58 ± 36.65 mg/dl) than in controls (98.32 ± 19.5 mg/dl, $n = 15$; $p < 0.05$), with levels above normal in 6 cases (19.3%; table I). We found, moreover, a further significant increase in the mean serum alpha-1-acid glycoprotein concentration following a single dialysis, although the behavior was not univocal (22 increase, 2 no change, 7 decrease; table I). We are not fully prepared at present for an explanation of these results. In none of our patients was the serum alpha-1-acid glycoprotein below normal after dialysis. According to Henriksen et al. [1], we concluded, therefore, that it seems unlikely that a lack of alpha-1-acid glycoprotein due to uremia per se or secondary to dialysis may have a role in the patho-genesis of hyperlipidemia in hemodialysis patients.

We would like, however, to raise one question about the other conclusion drawn by Henriksen et al. [1]. In fact, having observed serum alpha-1-acid glycoprotein levels above normal in only 19.3% of our patients {Henriksen et al. reported serum levels above normal in 80% of their patients), we think that the alpha-1 -acid glycoprotein measurement maintains its clinical value as an acute phase re-actant also in uremic patients on dialysis.

References

Henriksen, H. J. O.; Petersen, M. U.; Pedersen, F. B.: Serum alpha-1-acid glycoprotein (orosomucoid) in uremic patients on hemodialysis. *Nephron* 31: 24-25 (1982).

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Table I. Serum alpha-1-acid glycoprotein levels (mg/dl) before and after dialysis

Patients	Sex	Age	Alpha-1-acid glycoprotein
			before dialysis after dialysis

1. A.A.

M

26

62

73

2. A.I.

M
57
130
109
3. B.A.
M
76
158
180
4. B.C.
M
45
133
152
5. B.M.
F
45
109
152
6. B.S.
F
52
99
97
7. C.N.
M
66
103
132
8. C.S.
F
72
81
117
9. D.P.
F
16
80
81
10. D.S.
F
32
132
180
11. G.G.
F

38
132
152
12. G.M.
F
32
99
122
13. G.M.
F
34
90
81
14. G.N.
F
42
99
108
15. G.P.
M
68
103
94
16. L.I.
F
38
99
122
17. N.N.
M
54
108
119
18. P. A.
M
59
185
170
19. P.R.
M
37
122
140
20. R.G.
F
51

115
122
21. R.L.
F
55
101
119
22. R.M.
M
60
143
132
23. R.S.
F
61
90
99
24. S.A.
M
55
250
240
25. S.C.
M
41
142
174
26. S.E.
F
60
132
147
27. T.W.
M
53
127
158
28. V.G.
M
40
100
141
29. V.E.
F
59
62

99
30. Z.F.
F
61
108
99
31. Z.M.
M
61
151
187
Mean $\pm$ SD

117.58 $\pm$ 36.65
132.
* $p < 0.001$.