What is the Correct Leceithin/Sphingomyelin Ratio for Human High-Density Lipoprotein?

To the Editor:

Recently, Schmitz et al. (1) described the quantitative densitometric determination of lecithin (phosphatidylcholine or PC) and sphingomyelin (SP) in high-density lipoprotein (HDL) from human serum after its precipitation with phosphotungstic acid/MgCl₂. The concentration they found for men was 1.08 mmol/L and for women 1.12 mmol/L, whereas the sphingomyelin concentration for both was 0.23 mmol/L. Thus the PC/SP ratio of HDL is 4.70 for men and 4.87 for women according to these authors. However, much higher values have been reported for the PC/SP ratio of HDL. Scano (2), for instance, found for HDL₂ a ratio of 7.60, and Bloom and Elwood (3) published data from which this ratio can be calculated: 8.8. Likewise Breckenridge et al. (4) mention that in "normals" the PC/SP ratio of HDL₂ is 5.44 and for HDL₃ it is 7.11.

In my opinion it seems unlikely that these differences in PC/SP ratios should be caused exclusively by such differences in the control groups as age and sex. The possibility that the method of preparation of the HDL (precipitation vs ultracentrifugation) may influence the PC/SP ratio needs to be investigated.

References

D. O. E. Gebhardt

Dept. of Obstet. & Gynecol. University Hospital Leiden The Netherlands