

that the fructosamine assay responds strictly proportional to increasing glycation of albumin [12], which is in effect used for the standardization of an improved version of the fructosamine assay [13].

The argument that the fructosamine assay correlates well with the HPLC method [2] because both assays might be similarly sensitive to non-specificity or interferences does not take into account that these two assays operate by completely different principles. Glucose is one metabolite where common interference seems possible because it has reducing properties and binds to boronate affinity columns. However, apart from any resulting interference which would be expected to have the opposite result, free glucose is known to have little effect on the fructosamine assay [14]. Therefore, the probability that two basically different methods correlate well because of similar non-specificity seems extremely low. It appears much more likely that both assays correlate well because they measure closely related quantities, glycated albumin and protein glycation.

In summary there are strong arguments that the HPLC method might yield more accurate results for glycated albumin than those methods whose value has not been questioned. If accurate quantitation can be rigorously shown, then the HPLC method might serve as a reference for less complex and costly routine methods.

Yours sincerely,
E. Vorberg

References

- Cohen MP (1991) Caution: interpretation of results of HPLC assay for serum glycated albumin. *Diabetologia* 34: 766 (Letter)
- Shima K, Ito N, Abe F et al. (1988) High-performance liquid chromatographic assay of serum glycated albumin. *Diabetologia* 31: 627–631
- Rosenthal MA, Dearth KA (1991) Evaluation of an affinity chromatographic method for glycated protein and albumin as an indicator of diabetic control. *Clin Chem* 37: 962 (Abstract)
- Woo J, Weinstock RS, Ozark C, Sunderji S (1987) Glycated albumin affinity chromatography and radioimmunoassay in the management of diabetes mellitus. *J Clin Lab Anal* 1: 163–169
- Austin GE, Mullins RH, Morin LG (1987) Non-enzymatic glycation of individual plasma proteins in normoglycemic and hyperglycemic patients. *Clin Chem* 33: 2220–2224
- Johnson RN, Baker JR (1988) Inaccuracy in measuring glycated albumin concentration by thiobarbituric acid colorimetry and by boronate chromatography. *Clin Chem* 34: 1456–1459
- Vidal P, Deckert T, Hansen B, Welinder BS (1989) Low affinity chromatographical efficiency for the separation of glycated and non-glycated serum albumin. *Diabetologia* 32: 553A (Abstract)
- Rendell M, Kao G, Mecherikunnel P et al. (1985) Use of aminophenylboronic acid affinity chromatography to measure glycosylated albumin levels. *J Lab Clin Med* 105: 63–69
- Olufemi S, Talwar D, Robb DA (1987) The relative extent of glycation of haemoglobin and albumin. *Clin Chim Acta* 163: 125–136
- Garlick RL, Mazer JS (1983) The principal site of nonenzymatic glycosylation of human serum albumin in vivo. *J Biol Chem* 258: 6142–6146
- Johnson RN, Metcalf PA, Baker JR (1983) Fructosamine: a new approach to the estimation of serum glycosylation. An index of diabetic control. *Clin Chim Acta* 127: 87–95
- Schleicher ED, Vogt BW (1990) Standardization of serum fructosamine assays. *Clin Chem* 36: 136–139
- Henrichs HR (1990) European Fructosamine workshop report. *Wien Klin Wochenschr [Suppl]* p 180
- Workshop report Fructosamine (1989) Boehringer Mannheim GmbH, Mannheim, p 43

Dr. E. Vorberg
F. Hoffmann-La Roche AG
Grenzacherstraße 124
CH-4002 Basel
Switzerland

Erratum

Diabetologia, Volume 35, Number 3, March 1992

pp 267–271, A. Goday et al.: Incidence of Type 1 (insulin-dependent) diabetes in Catalonia (Spain)

On page 267, under the heading, should read:
A. Goday¹.

¹Servei d'Endocrinologia, Hospital Clinic, Servei d'Endocrinologia, Hospital de l'Esperança, Barcelona. Comissió d'Epidemiologia del Consell Assessor sobre la Diàbeis a Catalunya.

On page 270, Acknowledgements: Should be mentioned: Alberto Goday wishes to express his thanks for the facilities, support and encouragement given by Drs. E. Vilardell and R. Gomis, of the Servei d'Endocrinologia, Hospital Clinic, Barcelona.