Anemia is Common in Patients With Type 2 Diabetes

Prevention and early management of anemia in individuals with diabetes is important.

REVIEWED BY MERLIN C. THOMAS, MBCHB, PHD, FRACP

Anemia is a common finding among patients with type 2 diabetes, according to a report in the *American Journal of Kidney Diseases.* Merlin C. Thomas, MBChB, PhD, FRACP, and colleagues wrote that the condition constitutes an additional burden for these individuals.

"The early identification of anemia may be achieved by annual or biannual screening in high-risk groups with nephropathy, advanced age or macrovascular disease," Dr. Thomas and colleagues wrote. They undertook a study to clarify the natural history of anemia among patients with type 2 diabetes and to describe factors that predict a decrease in hemoglobin (Hb) levels. Dr. Thomas is from the Danielle Alberti Memorial Centre for Diabetic Complications, Baker Medical Research Institute in Melbourne, Australia.

The investigators designed a 5-year prospective cohort study to follow-up 503 patients with type 2 diabetes at a single diabetes clinical. In addition to standard management for these patients, a full blood count was obtained at each routine visit, Dr. Thomas said. There was no intervention undertaken to modify Hb levels.

Dr. Thomas and colleagues found that, at baseline, 12% of the patients had anemia, and an additional 13% developed anemia during follow-up. "Overall Hb levels decreased by -0.07 ±0.01 g/dL/year, suggesting that anemia is the endpoint of a process that begins more than 10 years previously with the initiation of vascular damage," they wrote.

The investigators found the greatest decreases in Hb levels in patients with macroalbuminuria, renal impairment or established macrovascular disease at baseline (all $P<.01$). In patients with microvascular disease, decreasing Hb levels tracked with decreasing glomerular filtration rates (GFR). The authors wrote that patients who had an estimated GFR >90 mL/min/1.73 m^2 or normoalbuminuria had stable Hb levels during the 5-year follow-up.

> The data from this study are important for developing a rational response to the prevention and management of anemia.

"In patients with anemia in our cohort who were managed conservatively, Hb levels decreased by 0.09 ±0.03 g/dL/year. This decrease was associated with HbA1c levels, but not renal function," Dr. Thomas and colleagues wrote.

These data are important for developing a rational response to the prevention and management of anemia, the investigators concluded. ■

Merlin C. Thomas, MBChB, PhD, FRACP, is from the Danielle Alberti Memorial Centre for Diabetic Complications, Baker Medical Research Institute, Melbourne, Australia. He may be reached at mthomas@baker.edu.au.

Thomas MC, Tsalamandris C, MacIsaac RJ, Jerums G. The epidemiology of hemoglobin levels in patients with type 2 diabetes. *Am J Kid Dis.* 2006;48:537-545.

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