Angiodysplasia of the Colon and Chronic Renal Failure

R.		Matesanz
J.L.		Teruel
F.		Liaño
J.		Ortuño

Department of Nephrology, Hospital Ramón y Cajal, Madrid, Spain

Dr. D. Rafael Matesanz, Servicio de Nefrología, Hospital Ramón y Cajal, Carretera de Colmenar, 9,100, 28034 Madrid (Spain)

Dear Sir,

Gastroduodenal angiodysplasia has been identified during the last years as an important cause of upper gastrointestinal bleeding in patients with chronic renal failure [1–3]. It has even been cited as the most frequent source of bleeding in these patients, in contrast to the predominance of peptic ulcer disease in the general population [4]. It was not unexpected that a pathologic process described primarily in the cecum and right hemicolon [5, 6], where more than 75% of reported cases are located [7] and which was recognized as one of the main causes of lower gastrointestinal bleeding in aged persons since the last seventies [8–10], was associated with chronic renal failure as it really happened, and several patients with angiodysplasia of the colon and chronic renal failure have been described [11–13]. We have recently observed 2 patients with this association.

Case Reports

A 58-year-old woman with chronic renal failure due to urolithiasis, on maintenance hemodialysis for 2 years was hospitalized because of massive rectal bleeding which required 26 blood units (about 1 unit per day). She denied previous history of gastrointestinal disturbances. Colonoscopy (× 2), oral panendoscopy (× 2), mesenteric arteriography, gastrointestinal series and barium enema were successively performed but the source of bleeding could not be detected. After injection of ^{51}Cr -labeled red blood cells, abnormal uptake was localized on the right hemicolon. At surgery there were scattered lesions up to 0,5 cm throughout the colon. A total colectomy with ileo-rectal anastomosis was performed. The resected specimen showed multiple vascular ectasias with focal mucosal erosions. The patient has experienced no further episodes of rectal bleeding 1 year after the operation.

A 67-year-old man with chronic renal failure due to gouty nephropathy (Ccr: 13 ml/min/1.73 m²) was hospitalized for evaluation of progressive anemia (Hb decrease from 12.6 to 5,5 g/dl after 6 months) with low serum ferritin level (19 ng/ml) and guaiac-positive stools. A sigmoid diverticulosis was detected in the barium enema but the gastrointestinal series, panendoscopy (× 2), colonoscopy (× 2), isotopic study with ^{51}Cr -labeled red blood cells (× 2) and mesenteric arteriography were otherwise normal. Six months later, arteriography was repeated because of a new episode of melena (he had required 2 blood units every 2–3 weeks): anomalous vascularization was then visualized in the cecum and right hemicolon but the bleeding point could not be detected. A new isotopic study showed a pathologic uptake of the right colon, and a total colectomy with ileosigmoid anastomosis was

performed. Vascular ectasias were identified histologically in the cecum and right hemicolon. Six months later, the patient has not had any further episodes of bleeding and the renal function remained stable.

The progressive aging of the dialysis population [14], the frequent and severe cardiovascular disease of these patients [15], the calcium-phosphorus metabolism disorders with a high incidence of vascular calcifications [16], the aluminum-hydroxide-induced constipation and even the eventual relationship between this metal and the local induction of telangiectases [17] are reasons to believe that this clinical entity, also known as arteriovenous malformation, vascular dysplasia, vascular ectasia, colonic ectasia and submucous ectasia [6, 7] is much more frequent than is usually recognized [5–7, 11–13] and can manifest by more or less severe recurrent bleeding or as a cause of chronic anemization, and only the great diagnostic difficulties, even after surgical removal [5–13], have prevented from this clinical association from being recognized.

References

Cunningham, J.T.: Gastric telangiectasias in chronic hemodialysis patients: a report of six cases. *Gastroenterology* 81:1131–1133 (1981).

Boyle, J.; Johnston, B.: Acute upper gastrointestinal hemorrhage in patients with chronic renal disease. *Am. J. Med.* 75: 409–412 (1983).

Griffin, P.J.; Salaman, J.R.; Lawrie, B.W.: Mid-duodenal bleeding in chronic renal failure. *Br. med. J.* 1: 1606 (1979).

Zuckerman, C.R.; Cornette, G.L.; Close, R.E.; Hartex, H. R.: 224

Matesanz/Teruel/Liaño/Ortuño

Upper gastrointestinal bleeding in patients with chronic renal failure. *Ann. intern. Med.* 702:588–592 (1985).

Weaver, G.A.; Alpern, H.D.; Davies, J.S.; Ramsey, W.H.; Reichelderfer, M.: Gastrointestinal angiodysplasia associated with aortic valve disease: part of a spectrum of angiodysplasia of the gut. *Gastroenterology* 77:1–11 (1979).

Case Record 7–1985. *New Engl. J. Med.* 572:427–435 (1985).

Meyer, C.T.; Troncale, F.J.; Galloway, S.; Sheahan, D.G.: Arteriovenous malformations of the bowel: an analysis of 22 cases and a review of the literature. *Medicine* 60:36–48 (1981).

Baum, S.; Athanasoulis, C.A.; Waltman, A.C.; Galdabini, J.; Schapiro, R.H.; Warshaw, A.L.; Ottinger, L.W.: Angiodysplasia of the right colon: a cause of gastrointestinal bleeding. *Am. J. Roentg. Rad. Ther. nucl. Med.* 729:789–794 (1977).

Welch, E.E.; Christos, A.; Athanasoulis, C.A.; Galdabini, J.J.: Hemorrhage from the large bowel with special reference to angiodysplasia and diverticular disease. *World J. Surg.* 2:73–83 (1978).

Boley, S.J.; De Biase, A.; Brandt, L.J.; Sammartano, R.J.: Lower intestinal bleeding in the elderly. *Am. J. Surg.* 757:57–64 (1979).

Dave, P.B.; Romeu, J.; Antonelli, A.; Eiser, A.R.: Gastrointestinal telangiectasias. A source of bleeding in patients receiving hemodialysis. *Archs intern. Med.* 144:1781–1783 (1984).

Quintero, E.; Pique, J.M.; Bombi, J.A.; Subias, R.; Montoliú, J.: Diagnóstico de angiodisplasia de colon mediante técnica de inyección vascular. *Medna clín.* 84:112–114 (1985).

Garcia Ruiz, C; Martinez Vea, A.; Boix, J.; Oliver, J.A. Angiodisplasia de colon e insuficiencia renal crónica (Letter). *Medna clín.* 55:387(1985).

Rotellar, E.; Lubelza, R.A.; Rotellar, C; Martinez Camps, E.; Valls, R.: Must patients over 65 be haemodialysed? *Nephron* 41: 152–156(1985).

Vicenti, F.; Amend, W.J.; Abele, J.; Feduska, N.J.; Salvatierra, O.: The role of hypertension in hemodialysis-associated atherosclerosis. *Am. J. Med.* 65:363–369 (1980).

Parfitt, A.M.; Massry, S.G.; Winfield, A.C.; De Palma, J.R.; Gordon, A.: Disordered calcium and phosphorus metabolism during maintenance hemodialysis. *Am. J. Med.* 57: 319–330 (1971).