Auto-Immune Haemolytic Anaemia in Ulcerative Colitis: Report of Three Cases

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Auto-immune haemolytic anaemia (AIHA) is a rare but severe complication of ulcerative colitis (UC) occurring in fewer than 1% of cases [1-4]. We present 3 cases of AIHA associated with UC.

Case 1

A 31-year-old man with a 10-year history of UC was admitted to the hospital in December 1992 for total proctocolectomy because of persistent colitis. A subtotal colectomy was performed 9 years before. On admission, his haemoglobin (Hb) level was 10.7 g/dl; leucocyte and platelet counts were normal. Reticulocyte count was $304 \times 10^9/l$, bilirubin 1.6 mg/dl, haptoglobin 0.23 g/l (normal value 1-2) and LDH 525 U/l (normal value 150-450). The direct antiglobulin test (DAT) was positive (anti-IgG), indirect antiglobulin test and eluate were also positive. After 7 days prednisone treatment (1 mg/kg/day) his Hb rose to 13.8 g/dl.

The patient underwent total proctocolectomy in January 1993. Steroids were reduced gradually and stopped in February 1993. Despite not having received treatment for 4 months, he felt perfectly well and his Hb level was 15 g/dl. He still had a weakly positive DAT.

Case 2

A 39-year-old woman was diagnosed as having UC in 1986. In October 1989, she was admitted to the hospital with acute haemolytic anaemia. Her Hb level was 6.7 g/dl, reticulocyte count was $196 \times 10^9/l$, bilirubin 3.2 mg/l, haptoglobin 0 g/l and DAT was positive (anti-IgG). Indirect antiglobulin test and eluate were positive. The patient was started on 2 mg/kg/day of prednisone, and her Hb rose to 12.7 g/dl over 3 months. Steroids were discontinued but DAT remained positive although weaker than previously.

In November 1990, her Hb level fell to 8.4 g/dl, and steroid treatment was reinitiated with a second complete response. In June 1991, her UC became exacerbated and haemolytic anaemia recurred 2 months later. She was treated with prednisone and azathioprine (150 mg daily), and for the third time responded to treatment.

In June 1992, she became pregnant, and azathioprine was stopped. During her pregnancy, she was maintained on low doses of de-flazacort (0.5 mg/kg/day); her Hb was stable at 11 g/dl without active colonic disease. A caesarean section was performed, and 2 healthy infants were delivered. Three months postpartum, her Hb was 13 g/dl and DAT was weakly positive.

Case 3

A 29-year-old female was diagnosed as having UC in June 1992. In December 1992, she was admitted to the hospital with bloody diarrhoea and acute anaemia. Her level was 7 g/dl, reticulocyte count was $232 \times 10^9/l$, bilirubin 2.33 mg/dl, haptoglobin 0.2 g/l and LDH 1,046 U/l. DAT (anti-IgG), indirect antiglobulin test and eluate were positive. Colonoscopy was performed revealing active colitis. Hydrocortisone (60 mg/kg/day) was started, but progressive anaemia developed. Intravenous gammaglobulin (400 mg/kg/day for 5 days) was tried, but on the 10th hospital day her Hb fell to 3.6 g/dl. The patient required red cell transfusion and three plasmaphereses were performed. A significant improvement in her Hb levels to above 9 g/dl was observed. On the 15th hospital day, the patient developed acute cholecystitis requiring a cholecystectomy and a splenectomy. Postoperatively, her Hb progressively dropped to 5 g/dl with severe haemolysis. High-dose methylprednisolone (1 g) was started and her Hb rose progressively to 9.8 g/dl. Steroids were reduced and azathioprine was instituted (150 mg daily). She was discharged in February with an Hb of 9.3 g/dl. Steroids were discontinued and azathioprine was maintained. One month later, Hb rose to 13 g/dl and remained stable for 3 months. However, her DAT remained positive.

A rational treatment of AIHA in UC should commence with a trial of steroids. A complete or partial response has been reported in about 40% of patients treated with steroids [5].

Immunosuppressive drugs associated with steroids have also been tried. This combination is recommended-

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mended by Lang et al. [4] for patients not responding adequately to steroids. Our observations support this approach.

In patients not responding to medical therapy, splenectomy or colectomy must be considered.

Complete remission of haemolysis after total colectomy suggests that the colon may be an important factor in red cell antibody production in UC. Yates et al. [6] were the first to prove that colonic mononuclear cells from a woman with UC and AIHA are capable of producing auto-antibody and that these cells may be the main source of red cell antibody. Several authors [1,2] suggest that patients unresponsive to

steroids should undergo total proctocolectomy directly, even in the absence of active colonic disease. Other authors [3,5] recommended splenectomy before total colectomy.

At the present time, in agreement with other authors [3-5], initially we recommended a conservative approach in AIHA associated to UC. Splenectomy should be performed on patients whose colitis is inactive or mild and their haemolysis resistant to steroids or other immunosuppressive drugs; total proctocolectomy should be reserved for patients not responding to splenectomy and for those who suffer from severe intractable colitis.

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