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Abdominal pain that mimics acute appendicitis caused by an ATG overdose in a kidney transplant recipient

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Sir: A 51-year-old female received a cadaver kidney from a donor who had died of intracerebral hemorrhage. Given the hypotensive periods during the transplantation procedure (TA 70/50 mm Hg, urine 80 ml/h, blood urea 30 mg%, blood creatinine 1.5 mg%, total furosemide used 400 mg, total dopamine used 600 mg), the donor age of 60, and the possible history of hypertension, we decided to use antithymocyte globulin (ATG) first and to convert to cyclosporin A (CyA) later as a sequential immunosuppressive protocol in order to avoid the early nephrotoxic side effects of CyA. There were two stenotic arteries on a single patch. The kidney was well perfused with Euro-Collins solution in situ. The transplantation was carried out by dilating the stenotic renal arteries and performing end-to-side anastomosis to the external iliac artery in the left iliac fossa.

The ATG dosage was 2 mg/kg per day, i. e., 100 mg/day, as the patient weighed 50 kg. Intravenous ATG perfusion was started 4 h prior to transplantation. At 28 h post-transplantation, the patient began to complain of abdominal pain on the side opposite the transplant. Physical examination showed slight ecchymosis around the incision cite and umbilicus. Doppler ultrasound showed excellent transplant perfusion with a calculated resistive index of 0.8. Increasing pain in the right lower quadrant, rebound tenderness, tenderness in the pouch of Douglas upon digital rectal examination, and a rectal temperature of 38 °C when the axillary temperature was 37.2 °C led us to suspect acute appendicitis. In order to prevent any untoward consequences, a laparotomy was performed. This revealed a normal appendix but the presence of a retroperitoneal hematoma and a preperitoneal dissecting hematoma in the anterior pelvic region extending to the retroperitoneal part of the cecum. The procedure was terminated and the patient was brought back to the intensive care unit.

The first 5 postoperative days were holidays, and so a limited number of medical staff was available. On the 3rd postoperative day, the nurse on duty reported that the ATG box was lost. Laboratory tests revealed increasing fibrin-split products and a decreasing hematocrit and platelet count. The patient was re-evaluated on the assumption that the ATG doses had been skipped. She was then started on 1 g methylprednisolone i. v. and triple therapy consisting of CyA, azathioprine (Aza) and prednisolone (P). On the 5th postoperative day, investigation of the events showed that the ATG dosage had been miscalculated and that 1000 mg ATG had been administered to the patient on the 1st and 2nd postoperative days. When this was discovered, Aza was withdrawn from the protocol and immunosuppression was continued with CyA and P. Acyclovir prophylaxis was started at a dosage of 1600 mg/day, and polyvalent human immunoglobulin was administered on postoperative days 4, 5, and 7. There were no subsequent complications and the patient was discharged from the hospital on postoperative day 39. Doppler ultrasound showed no signs of rejection and the resistive index was approximately 0.8.

When administered within the recommended dosage range, it is seldom necessary to stop ATG due to side effects such as neutropenia and thrombocytopenia. In our patient, who received an accidental ATG overdose, the prominent symptoms were high temperature, abdominal pain mimicking acute appendicitis, an increase in fibrin-split products, and thrombocytopenia. These appear to reflect a massive release of mediators during lympholysis caused by the overdose. Zlabinger et al. reported a 62 % decrease in the ATG overdose by early plasmapheresis [1]. In our case, the delayed discovery of the event prevented us from taking this opportunity. The hematological parameters returned to normal on the 15th postoperative day, which shows that the adverse effects of such an overdose are reversible. On the following days, the clinical status of the patient and the Doppler ultrasound results were stable.

Our experience leads us to believe that it might be worth considering the beneficial effects of high-dose ATG in acute rejection episodes, especially in heart or liver transplantation, where no artificial support of function is possible.

References

1. Zlabinger GJ, Pohanka E, Doleschel W, Zielinski C, Wolf H, Kovarik J (1988) ATG overdose in a kidney-grafted patient. Transpl Int 1: 168–171

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