Sr. Director:

In 1982, the demonstration of growth inhibiting properties led to the first clinical trials with IFN-α as a biological agent used in cancer treatment. Since then, it has been applied in the treatment of several malignancies and several adverse effects were reported.

CASE

A 39 years old caucasian female, on the 9th january 2001, was observed for obnubilation. She had high blood pressure, anaemia, thrombocytopenia, moderate renal failure and an increase of serum LDH levels. She suffered from chronic myeloid leukaemia (CML) treated with IFN-α, hydroxyurea and cytarabine, during 48 months, with haematological response. She had no other relevant antecedents and did not take other drugs. The patient was admitted to complementary study, cancer treatment was discontinued and anti-hypertensive treatment was started.

During the first inpatient week she complained of orthopnoea, oedema and oliguria. Analysis revealed a non-immune haemolytic anaemia (Hg-7,9 g/dl, haptoglobin < 0,058 g/l, negative Combs tests, peripheral blood film showed schistocytes and spheroctyes, LDH > 1.000 U/L) and renal function deterioration (ureic nitrogen-53 mg/dl and creatinine-6,8 mg/dl). The microbiological study of blood, urine and stools were negative. HBV, HCV and HIV serologies were negative. Serum values of C3 and C4 complement fractions were normal. Searches for circulating immune complexes, cryoglobulin, auto-antibodies were negative. Urinalysis showed proteinuria of 1.2 g in 24 hours. Pregnancy test was negative. Renal ultrasound was normal. The histological study of the kidney revealed thrombotic microangiopathy (TM) (fig. 1). The clinical evaluation and the complementary study enabled the diagnosis of hemolytic uremic syndrome (HUS).

The patient was submitted to plasmapheresis and was treated with prednisolone 1 mg/kg, po, id. She started haemodialysis on the 14th day of internment, because of progressive worsening of renal function. The haematological abnormalities and LDH levels normalised, but there was no recovery of renal function. On the 16th february 2001 she restarted the cancer treatment with cytarabine and hydroxyurea and no recurrence of the HUS occurred. She died on the 19th september 2002 because of the CML progression.

DISCUSSION

HUS is a rare entity most frequently caused by infections, malignancies, drugs, auto-immune diseases and pregnancy. There are some cases of idiopathic cause.

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According to the published literature, CML is not
a malignancy that separately induces the HUS, un-
lke certain solid tumours.

In this case report, the haematological control of the CML prior to the ma-
manifestation of the HUS and the absence of recurren-
ce over 19 months of survival, after its remission, are
factors that turn the hypothesis of the CML to be the
cause of HUS very unlikely.

The induction by chemotherapeutic agents is not
described with hydroxyurea or cytarabine.

IFN- has been identified as cause of TM in CML pa-
tients. In the presented case, the absence of HUS
recurrence after reintroduction of cytarabine and hy-
droxyurea, strains the hypothesis of induction by
IFN-.

Also in favour of these hypothesis is the
known fact that the IFN- toxicity is greater with hig-
hier doses and longer periods of administration, con-
ditions verified in this case.

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