**ABSTRACT**

Case report: An 18-year-old male affected by acute lymphoblastic leukemia (ALL) after having reached complete remission after chemotherapy developed bilateral optic nerve infiltration.

Discussion: Infiltration of the optic nerve may appear as an isolated sign of extramedullary relapse of ALL months in advance of the hematologic relapse (Arch Soc Esp Oftalmol 2007; 82: 167-170).

Key words: Leukemic infiltration, optic nerve, leukemia, lymphocytic, acute, remission induction, recurrence.

**CASE REPORT**

An 18-year-old male with ALL-T personal history, in complete remission during 6 months after chemotherapy as per PETHEMA LAL – high risk protocol /2003 (Vincristina, daunorubicine, prednisone, Lasparraginase, cyclophosphamide, with intratecal chemotherapy) and in the waiting list for alogenic transplant of hematopoietic parents, who visited the urgency ward of our hospital due to a visual acuity loss in both eyes. VA of 1/10 in right eye (RE) and finger counting with left eye (LE) coursing for two days. An eye fundus exploration (EF) revealed a massive bilateral disc edema (figs. 1 and 2). The rest of the ophthalmological exploration was normal.

Even though the differential diagnostic included other pathologies such as high blood pressure, dia-
betes, intracranial mass, benign intracranial hypertension, bilateral optic neuritis or sarcoidosis among others (2), due to his age and mainly his personal pathological history, the first suspicion was from the beginning infiltration due to ALL-T.

The rest of exploration were normal: nuclear magnetic resonance (NMR) normal, viral serology negative, lumbar puncture negative, absence of relapse in hemogram.

Even though we did not find any neuromeningeal infiltration, additional intratecal chemotherapy (CHT) doses were given. The EF improved, exhibiting a less acute optic disc edema (figs. 3 and 4). During the hospital stay the patient suffered multiple complications such as bronchopneumonia, adult respiratory distress syndrome, suffocating neck hematoma and pseudo brain tumor, requiring a tracheostomy.

Six weeks after hospital release, a new EF exploration was made because the visual symptoms worsened. The exploration revealed an exudative retina detachment in RE with bilateral disc edema (figs. 5 and 6). At that time, the hemogram showed peripheral leucocytosis with blastosis and medulla aspiration exhibited massive ALL-T infiltration.

The patient received treatment with corticoids and CHT (phase B of Hyper CVAD protocol and intratecal therapy), exhibiting successive improvements and worsening of VA. No radiotherapy was administered (2,4) because it is not included in the

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**Fig. 1 y 2:** Bilateral optic disc edema suggesting ALL-T infiltration. Large disc edema with abundant hemorrhage, exudates and vascular tortuosity.

**Fig. 3 y 4:** Appearance of the papillae after administrating the extra doses of intratecal CHT. The optic disc edema has lessened in both eyes.
The chemotherap y treatment did not achieve a new remission of the disease and the patient died a few months later.

**DISCUSSION**

Optic nerve infiltration can appear as an isolated sign of ALL-T extra-medullar relapse, preceding in even several months the hematological relapse. Even though the EF usually appears altered, the optic nerve may be involved with loss of VA, but with normal EF, NMR and lumbar punction (4). It is important to perform regular checkups in these patients, including a full ophthalmological exploration with eye fundus, particularly if they exhibit visual symptoms, because an earlier detection of the relapse with an ensuing early treatment can improve the patient’s vital prognosis. The visual prognosis is always very poor (3,4).

**REFERENCES**