#### Annual Saudi Hematology Congress

# Title

## Spontaneous orbital hematoma revealing acute promyelocytic leukemia

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### Introduction

Acute promyelocytic leukemia (APL) is a particular form of acute myeloid leukemia (AML) clinically, cytologically and molecularly. The majority of patients present at diagnosis with hemostasis abnormalities of varying degrees leading to an increased incidence of thrombotic and hemorrhagic complications.

## Methodolgy

We report the observation of a LAP revealed by a spontaneous hemorrhagic syndrome of isolated orbital location.

### Results

This is Mrs. A.R, aged 32, who presented with a COVID 19 infection 5 months ago associated with pancytopenia (Hemoglobin = 4.7 g / dl; PMN = 0.55 G /L; platelets: 24 G/L) for which she was hospitalized, a bone marrow biopsy was performed, returning in favor of a rich marrow with a reactive appearance.

The patient consulted after 2 months for an increase in the volume of the right eyeball, of acute installation in less than 24 hours, without any notion of trauma. The ophthalmological examination found proptosis of the right eye with palpebral ecchymosis on intra-orbital hematoma of the right eye causing ocular hypertonia. Cranio-orbital CT revealed a right extra-conical hematoma measuring  $30 \times 15$  mm. A cell blood count was carried out showed thrombocytopenia at 25 G/L, on the smear we found 16% of blasts, hence the realization of a myelogram with immunophenotyping which showed infiltration of the marrow by an 88% blast population. The evolution was marked by the appearance of a hematoma at the site of the sternal puncture, the fulminant increase in the volume of his intra-orbital hematoma and the ascent of the leukocyte count to 74 G/L. Symptomatic treatment was instituted but without improvement. Given the clinical deterioration, a cerebro-facial CT scan was redone, revealing a cerebellar hematoma, resulting in the sudden death of the patient.

#### Conclusion

APL has evolved from a fatal disease to a highly curable disease, thanks to targeted molecular therapy especially all-trans retinoic acid (ATRA). However, the high incidence of early hemorrhagic death is currently the main contributor to treatment failure in this pathology, hence the importance of early diagnosis of the disease and the prevention of thrombotic and hemorrhagic events.

