The Cytogenetic Profile of Adult Acute Myeloid Leukemia in Morocco

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Introduction

- Acute myeloid leukemia (AML) represents 1% of cancers and 80% of leukemia cases in adults, with an incidence that increases with age.
- AML is characterized by cytological and cytogenetic clinical heterogeneity.
- The detection of cytogenetic abnormalities detected constitutes one of the most powerful independent prognostic factor of this pathology
- It serves as an integral component of the choice of therapeutic strategy.

Objective

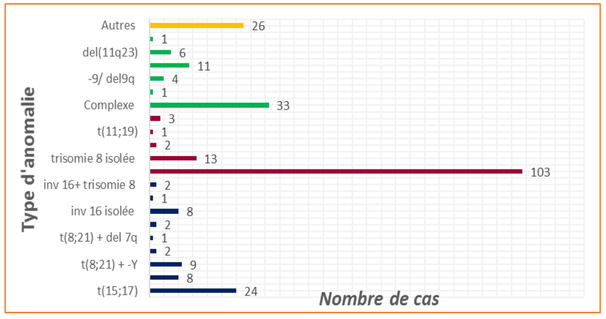
- The aim of our study is evaluate the cytogenetic profiles of patients with AML in Morocco.

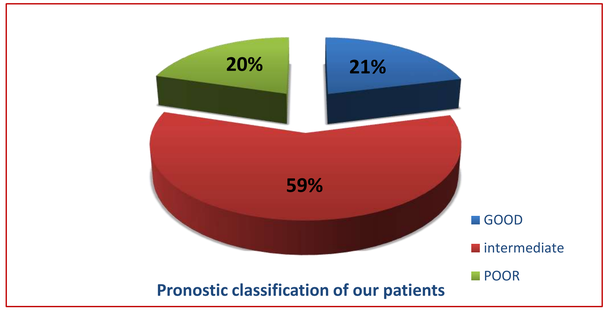
Materials and methods

- A retrospective study over 4 years : January 2014 to December 2018,
- Patients aged 18 and older diagnosed with AML.
- Data were collected from patient medical records and the cytogenetic database. Prognostic groups were determined according to the ELN 2017 classification.

Results

- 309 patients were collected
- Median age : 43 years [18-72]
- Sex ratio M/F : 0.98
- cytogenetic studies were successfully performed in 261 patients =85.5%.
- Chromosomal abnormalities were found in 161 patients





- Molecular biology was studied in 47 patients =15.21%.
- It allowed to change the pronostic classification in 11 patients = 23.4%

Pronostic before molecular biology	Pronostic after molecular biology
Intermediate prognosis :	Good prognosis :
46,XY	CBFB+
46,XY	CBFB+
46,XY	CEBPA+FLT3-NPM1+
46,XX	CEBPA+FLT3-NPM1-
46,XX	CEBPA+FLT3-NPM1-
46,XX	CEBPA-FLT3-NPM1+
46,XY,der16,del12	CBFB+
47,XX,+8	CBFB+
Intermediate prognosis:	Poor prognosis:
46,XY	FLT3 ITD+
46,XX	FLT3+CEBPA-NMP1-
46,XY	FLT3+CEBPA-NMP1-

Discussion-Conclusion

- The intermediate group was the most represented in our series, which agrees with the data in the litterature.
- The t (15;17) is reported as the most common aberration in Spain, and China of AML with respectively 14.8%,and 14% whereas in our series, this translocation was identified in 9.20 %. The t (8;21) was observed in 8.42% of patients, this is comparable to previous reports of other series in the literature
- The mutations associated with AMLs have continued to increase in recent years due to advancements in laboratory tools.
- Molecular biology must be an integral component of diagnosis of AML in our practice, in order to improve the therapeutic management of the different prognostic groups.

References

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