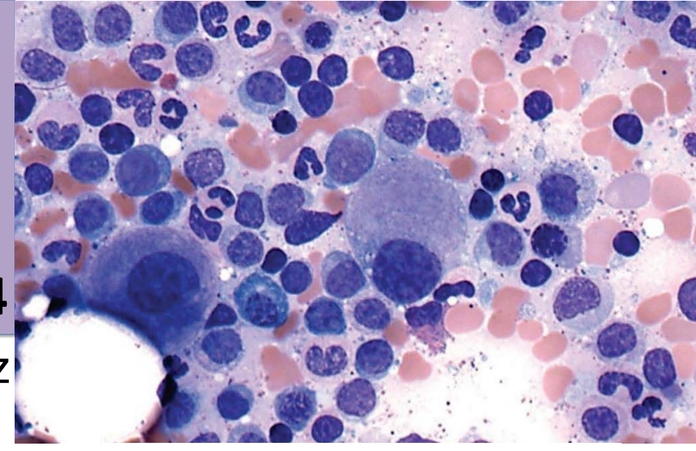
CLINICAL IMPACT OF GENOMIC BIOMARKERS PREDICTORS OF RESPONSE AND THE THERAPEUTIC STRATEGY IN PATIENTS WITH MYELODYSPLASTIC SYNDROME ASSOCIATED WITH DEL(5Q) 4CPS-194



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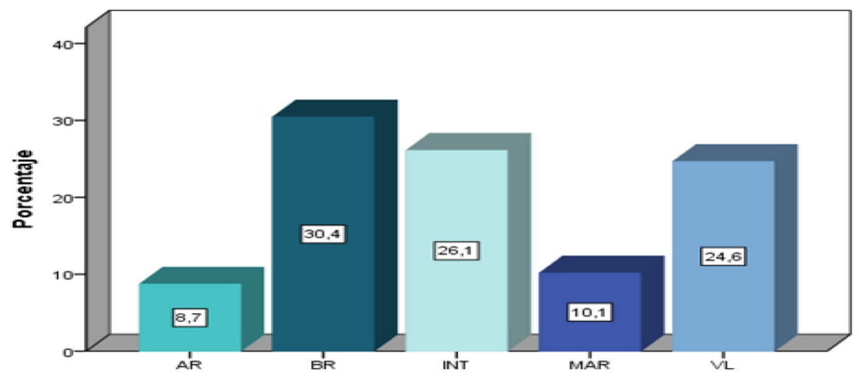
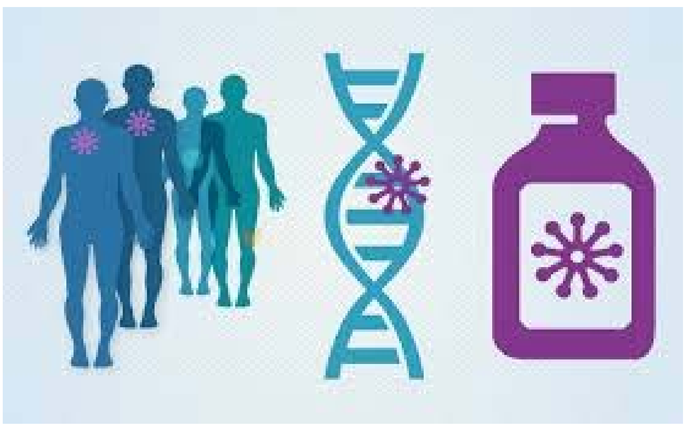
PURPOSE

To analyze the clinical impact of the directed risk-stratification therapy and to evaluate the clinical benefit associated to the discontinuation of the Lenalidomide treatment due to side effects or intolerance.



MATERIAL AND METHODS

- Prospective observational study conducted over a period of 3 years in a third level hospital.
- 69 patients diagnosed with MDS have been analyzed, 17 of them with del(5q).
- Mutational profile analysis using Next-Generation Sequencing (NGS) prior to Lenalidomide treatment decision-making, with TP53 mutation as ultra-high risk profile for discouraging its use.
- To identify genes that may predict response to lenalidomide, we performed targeted next-generation sequencing of a panel of 28 genes recurrently mutated in hematologic malignancies in a cohort of patients with MDS del(5q).
- To evaluate the clinical impact of discontinuation of lenalidomide were measured: beginning of treatment, Lenalidomide mean dose, ending of treatment and beginning of discontinuation, side effects, time after discontinuation, evaluation of the drug withdrawal response and cost savings.



RESULTS

- 69 MDS cases were analyzed by NGS.
- The mutational profile was classified as: high-risk (6), low-risk (21), intermediate risk (18), very high-risk (7) and very low-risk (17). 17 cases were detected as MDS associated to del(5q) and 5 of them showed positive TP53 mutation and were treated with hypomethylating agents instead of Lenalidomide meanwhile 7 of them showed DNMT3A, ASXL1, SF3B1 and TET2 mutations.
- 11 patients with MDS associated to del(5q) were treated with Lenalidomide, the treatment were discontinued in 6 of them due to side effects and the dose reduced in 3 cases due to intolerance.
- The reported side effects were: Grade 4 neutropenia, rhabdomyolysis, erythematous reactions and haemolytic crisis.
- The cost saving associated to the discontinuation of Lenalidomide 10mg was 48.000 euros per patient per year.

CONCLUSION

- The use of NGS allows selecting the mutational profile of each patient, resulting in a change i therapeutic decision-making, the selection of more cost-effective drugs and a directed and persona treatment.
- Discontinuation of Lenalidomide, due to side effects or intolerance, involves a clinical benefit to t patients who maintain a complete haematological response after interruption of the treatment.

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