=0.007), poor-risk karyotype (HR 4.8 95% CI 2.29 – 10, p <0.001), hemoglobin < 8.5 (HR 3.44 95% CI 1.56 – 7.88, p =0.002) and platelets < 80.000 (HR 3.5 95% CI 1.49 – 8.23, p =0.002). In multivariate analysis, parameters associated with worse OS were transfusion dependency (HR 2.26 95% CI 1.27 – 4.04, p = 0.006) and poor karyotype (HR 2.53 95% CI 1.41 – 4.57, p =0.002). Thirty-five patients (50%) had febrile neutropenia, and 30% delayed one or more cycles. **Discussion:** The results reinforce the poor outcomes of higher-risk MDS despite the use of HMA. Some real-world studies previously published had already showed a suboptimal drug benefit, probably by the underutilization and low persistence of the treatment, in a subgroup of critically ill patients. **Conclusion:** This retrospective analysis confirms the poor prognosis of higher-risk MDS treated with HMA. Poor-risk karyotype and transfusion dependency are the main factors that impact the outcomes.

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CYTOGENETIC ANALYSIS OF 2,205 CASES OF HEMATOLOGICAL NEOPLASIA AND GENETIC DISEASES: A SINGLE CENTER EXPERIENCE

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Cytogenetics is defined as the study of chromosome morphology, pathology function, and behavior. Cytogenetics is important to define clonality for bone marrow disorders and for diagnosing a lot of constitutional disorders. We analyzed a ten-year experience of bone marrow and peripheral blood cytogenetics for defining clonal and not clonal disorders at the Cancer Cytogenomics Laboratory of the Federal University of Ceará. All bone marrow and peripheral blood samples were submitted to cell culture (for 24 hours and 72 hours, respectively), after which all were processed, and G-banding performed using trypsin and Wright-Giemsa staining. The karyotype results of 2,205 patients were analyzed including additional information such as age, sex, requesting unit and suspected diagnosis. Among these, 1744 (79.1%) were bone marrow samples and 461 (20.9%) were peripheral blood samples used to investigate constitutional changes. The female gender (54.4%) stood out in the Bone Marrow samples, aged between 71 and 80 years (20.2%). Among the bone marrow results, 726 of 1744 (42%) were normal and 431 of them (24.7%) were abnormal karyotypes. The main etiological suspicion was Myelodysplastic Syndrome (54.2% of cases), and 42.1% were normal. Among the chromosomal abnormalities, the main alterations found were: 26% cases with isolated del (5q) and/or other alterations, 10% of cases were complex, 10% were isolated del(11q) and/or with other alterations, 9% of cases with del (7q) isolated and/or with other alterations and 7% cases with +8 isolated and/or with other alterations, 2% cases had del(17q) isolated and/or with other alterations, 1% of cases had del(17p) and one case with i(17q). A total of 127 cases were suspected as AML, with 34.6% altered karyotypes, 34.4% normal karyotypes. Among the abnormal karyotypes: 20,5% cases with t(15;17) and 13,6% were complex karyotypes, 6,8% were del(11q23), 4,5% cases with t(8;21), 1 case with del (17p) and another with i(17q). A total of 161 cases were suspected as CML, among which: 49,7% abnormal karyotype, 24.2% were normal. Among the chromosomal abnormalities, 65% were t(9;22) and 2,2% were t(9;22) and other alterations and/or variants of t(9;22). In this way, this study shows that cytogenetic was important for diagnostic purposes of patients principally for diseases such as Myelodysplastic Syndrome, Acute Myeloid Leukemia and Chronic Myeloid Leukemia. Cytogenetic analysis is also fundamental for analysis of constitutional and somatic genetic disorders. Regarding the constitutional results, 176/461 (38%) showed chromosomal abnormalities with 66 (37.5%) showing trisomy 21 followed by trisomy 18 (14.7%) and androgen insensitivity syndrome (11.3%). Identification of constitutional or malignance chromosomal anomalies can provide important information for genetic medical counseling. Cytogenetic analysis of hematological neoplasms and for constitutional disorders is helpful for diagnosis and monitoring the effects of treatment, being still very important in the new molecular era.

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TROMBOCITOSE ESSENCIAL COM PROGRESSÃO PARA LEUCEMIA AGUDA: RELATO DE CASO

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Introdução: A trombocitose essencial (TE) é uma síndrome mieloproliferativa caracterizada pela hiperproliferação dos megacariócitos na medula óssea e trombocitose no sangue periférico. Podem ocorrer eventos trombóticos, hemorrágicos ou sintomas vasomotores. A evolução para leucemia aguda é rara. **Relato:** Paciente feminina, 68 anos, hipertensa, tabagista (53 maços-ano) e com neuralgia do trigêmeo. Uso de antihipertensivos, ácido fólico, ácido acetilsalicílico 100mg/dia e