recorrência trombótica e manter estabilidade clínica, sem progressão para estágios avançados da PV.

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PROGNOSTIC SCORES AND MOLECULAR RESPONSE IN CHRONIC MYELOID LEUKAEMIA: COMPARATIVE ANALYSIS AND PREDICTIVE MODELLING IN A REAL-WORLD COHORT

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Introduction: Prognostic stratification in chronic myeloid leukaemia (CML) is essential to guide early therapeutic decisions and monitor response to tyrosine kinase inhibitors (TKIs). Traditional scores such as EUTOS and ELTS, alongside molecular parameters like *BCR::ABL1* levels, may offer complementary insights into disease aggressiveness and treatment outcomes. **Objectives:** To compare clinical, laboratory, and molecular features according to EUTOS, ELTS, and baseline *BCR::ABL1* levels, and to evaluate their predictive power for early molecular response (EMR) at three months. **Material and methods:** A retrospective analysis was conducted in a CML cohort (n = 176). Patients were stratified by EUTOS (cut-off: 87), ELTS (cut-off: 2.21), and BCR::ABL1 baseline load (cut-off: 100%). Variables were analysed using Mann–Whitney U tests and Spearman's correlations. Predictive modelling for EMR (*BCR::ABL1* <10% at month 3) was performed using logistic regression and ROC curve analysis. **Results:** Patients with EUTOS >87 had significantly lower haemoglobin (8.15 g/dL vs 10.4; $p < 0.001$), higher basophils (8.0% vs 3.0%; $p < 0.001$), splenomegaly (14.0 cm vs 5.0 cm; $p < 0.001$), and higher *BCR::ABL1* at baseline and month 3. Time to TKI switch was shorter (20.7 vs 40.1 months; $p = 0.029$). ELTS >2.21 was associated with higher circulating blasts (19.45% vs 4.5%; $p < 0.001$), eosinophilia, and spleen size. Patients with *BCR::ABL1* >100% showed poorer EMR (34.5% vs 5.1%; $p = 0.014$), though no other significant clinical or haematological differences were observed. Spearman analysis revealed moderate positive correlations between EUTOS and basophils ($\rho = 0.65$) and spleen size ($\rho = 0.60$), and negative correlation with age ($\rho = -0.21$) and haemoglobin ($\rho = -0.31$). ELTS was positively correlated with circulating blasts and spleen size, and negatively with age and haemoglobin. BCR0 was positively associated with CD34+ expression and LDH levels. In univariate logistic regression, BCR0 had the strongest predictive power for EMR failure (OR = 1.022; AUC = 0.763), followed by EUTOS (OR = 1.017; AUC = 0.703). ELTS had no predictive value (AUC = 0.471). In multivariate analysis, only BCR0 remained a significant independent predictor of EMR (OR = 1.019; $p = 0.038$), while EUTOS and ELTS lost significance. **Discussion:** This study reinforces the clinical relevance of *BCR::ABL1* baseline quantification as an early predictor of molecular response more robust than traditional prognostic scores in both univariate and multivariate contexts. While EUTOS retained some predictive value in univariate analysis, its overlap with molecular markers may limit independent utility. ELTS did not demonstrate significant discriminative capacity for early response. **Conclusion:** Baseline *BCR::ABL1* transcript level is a robust and independent predictor of early molecular response in CML in this cohort. EUTOS may offer additional stratification in select contexts, but ELTS appears limited in its utility for predicting short-term outcomes. Incorporating molecular load at diagnosis could enhance individualised therapeutic strategies in CML management.

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RELATO DE CASO: INFILTRAÇÃO BLÁSTICA MIELOIDE ISOLADA DO SISTEMA NERVOSO CENTRAL EM LMC COM RMC 5.0 – UMA RARA APRESENTAÇÃO

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Introdução: A infiltração blástica isolada do sistema nervoso central (SNC) em pacientes com leucemia mieloide crônica (LMC) em fase crônica e resposta molecular profunda é uma ocorrência extremamente rara e de difícil suspeição clínica. O SNC constitui um santuário farmacológico, com barreira hematoencefálica que limita a penetração de diversas drogas, sendo necessária, na maioria das vezes, abordagem multimodal para controle da doença. Este trabalho descreve um caso raro de infiltração blástica isolada do SNC em paciente jovem com LMC em resposta molecular profunda (RMC 5.0) abordando sua apresentação clínica, manejo terapêutico, evolução e indicação de transplante alogênico de medula óssea. Trata-se de análise retrospectiva de caso clínico acompanhado por serviço de hematologia de hospital privado brasileiro, com dados obtidos por revisão de prontuário eletrônico e literatura atualizada em bases como PubMed e UpToDate. **Descrição do caso:** Paciente do sexo feminino, 21 anos, com diagnóstico de LMC em fase crônica desde 2020, aos 16 anos, tratada com imatinibe 400 mg/dia, mantendo resposta molecular profunda (BCR-ABL indetectável) até outubro de 2024. Em dezembro de 2024, apresentou quadro

neurológico com cefaleia intensa e diplopia. Punção liquórica revelou 12% de blastos mieloides por imunofenotipagem, enquanto a medula óssea mantinha mielograma, e biópsia (anatomopatológico e imunohistoquimica) sem critérios para leucemia aguda além de BCR-ABL p210 indetectável. Frente à infiltração blástica isolada do SNC, foi realizada a substituição do inibidor de tirosina quinase para dasatinibe 140 mg/dia, pela melhor penetração no SNC, iniciou-se protocolo de quimioterapia intratecal MADIT (metotrexato, citarabina e dexametasona). Após a segunda aplicação, a paciente apresentou crises convulsivas recorrentes, sendo associada quimioterapia sistêmica com altas doses de citarabina (HIDAC: 3 g/m^2 a cada 12 horas, 6 doses por ciclo). Ao todo foram realizadas 12 aplicações de quimioterapia intratecal e um ciclo de HIDAC, mantido dasatinibe até os dias atuais. A paciente evoluiu com negativação da imunofenotipagem liquórica e manutenção de BCR-ABL indetectável na medula óssea, que também permaneceu sem sinais de transformação blástica em mielograma, Imunofenotipagem e biópsia (anatomopatológico e imunohistoquimica). Apesar da remissão atual, considerando o caráter localizado da recaída e o risco de progressão extramedular, o caso foi discutido em equipe multidisciplinar, sendo indicada a realização de transplante alogênico de medula óssea como potencial medida curativa. A paciente não possui doador aparentado compatível. Foi identificado doador não aparentado 10/10 compatível pelo REDOME, com encaminhamento para realização de TMO. **Conclusão:** Este caso ilustra uma apresentação atípica e grave da LMC, com infiltração blástica isolada no SNC, exigindo abordagem terapêutica intensiva e multidisciplinar. O reconhecimento precoce dessa evolução rara e o encaminhamento para transplante alogênico são fundamentais para oferecer chance de cura e prevenir recaídas sistêmicas ou neurológicas futuras.

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RELATO DE EXPERIÊNCIA: HISTÓRICO DE USO DE IMATINIBE NO PRIMEIRO PACIENTE COM LEUCEMIA MIELOIDE CRÔNICA, NA FUNDAÇÃO HEMOAM, NO AMAZONAS

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Introduction: Imatinib mesylate was the first inhibitor of Abl tyrosine kinase used for the treatment of Chronic Myeloid Leukemia. Before tyrosine kinase inhibitors, most patients died within four years after diagnosis of the disease, since the only form of survival offered was bone marrow transplantation, a procedure not accessible to everyone. We report a real-life case of the first patient with Chronic Myeloid Leukemia to receive imatinib mesylate in Amazonas and achieve treatment-free remission. **Case report:** 36 years old, male, only child, diagnosed in 1998 with Chronic Myeloid Leukemia, Philadelphia chromosome positive, in the chronic phase. He presented with mild anemia, 159.000 leukocytes, staged deviation to blasts and PC: 278,000/mm^3. Sokal index 0.7 points, low risk, hypercellular BM without blast infiltration, positive cytogenetics t (9;22) (q34; q11), receiving cytoreduction with hydroxyurea. The patient evolved with normalization of blood count without clinical symptoms but persisted with positive cytogenetics. HLA-compatibility test in 12 thousand donors found no donor. We requested patient entry a phase III clinical trial of imatinib, in MD Anderson Hospital, in the United States, but the study was closed, and it was recommended to use the protocol Interferon 9,000iu/day, SC week + Ara-C 10 mg SC day, from November 2018 to October 2020. But the patient suffered many side effects, such as muscle pain and diarrhoea, with several interruptions due to severe cytopenia's followed by leucocytosis and suspected progression to an aggressive phase. In Novembre 2020, the patient was included in a new study in MD Anderson Hospital, performing positive cytogenetics and positive PCR with b2a2 and b3a2 transcripts and starting imatinib 600 mg/day, achieving hematologic remission, followed by cytogenetics and molecular remission. After 5 years, imatinib was reduced to 400 mg/day. He maintained periodic molecular control and in 2018, with PCR still undetected, imatinib was discontinued. For the next seven years PCR remained negative, implying remission without treatment. **Conclusion:** Approximately 40-50% of patients who used imatinib and discontinued treatment remained in complete molecular remission. The Sokal index, when low risk, favors deep remission and increases the possibility of discontinuation by 81%, as was the case of the patient reported. The concept of remission without treatment still requires further studies, since the molecular mechanisms that regulate discontinuation are not clearly known.

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