LEUKAPHERESIS AS A TEMPORIZING MEASURE IN LEUKOSTASIS DUE TO ACUTE MYELOID LEUKEMIA

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Introduction: Leukapheresis is a procedure based on mechanical separation of leukocytes and it has been used in many hematological disorders such as Acute Myeloid Leukemia (AML). Concerning survival and the prevention of complications, it has shown heterogeneous results in multiple studies. **Objective:** To present two cases in which leukapheresis was performed and yielded good results in terms of WBC reduction and preventing leukostasis complications. **Results:** Case 1 – Man, 76 years old, presented with dyspnea, thoracic pain and decline of overall state, Complete Blood Count (CBC) showed: Hemoglobin (Hb) 7.7 g/dL, White Blood Count (WBC) 235,130 mm^3 (94% blasts), platelets 28,000 mm^3. Physical exam with signs of retinal leukostasis and hemorrhage. Blasts morphology was suggestive of AML and leukapheresis was performed. The procedure lasted 6 hours without any unforeseen consequences. Hydroxyurea (HU) was also initiated. WBC reduced to 57,610 mm^3. Chemotherapy started 2-days after and there was complete symptomatic recovery. Case 2 – Woman, 80-years old, presented with asthenia, weakness, headache, visual blurring, dyspnea and cutaneous and mucosal bleeding, CBC showed Hb 5.8 g/dL, WBC 181,400 mm^3 (90% blasts), platelets 140,000 mm^3. Physical exam also showed signs of retinal hemorrhage and leukostasis. Blasts morphology suggested myelomonocytic AML. Leukapheresis was performed and WBC reduced to 75,310 mm^3, in concomitance HU was initiated. Chemotherapy started 3-days after and the patient was discharged, but 3-months after she presented acute cognitive disorientation and WBC was 290,000 mm^3. Another leukapheresis session was performed but the patient progressed to death on the same day. **Discussion:** Leukostasis is a medical emergency, commonly observed in AML patients, and is associated with increased morbidity and mortality due to tissue hypoxia, tumor lysis syndrome and intracranial hemorrhage, the 1-week mortality can be as high as 40%. Rapid cytoreduction is indicated for symptomatic leukostasis patients as the ones described here. HU or other cytoreductive agents are useful temporizing measures. Although the benefits of leukapheresis versus cytoreductive agents alone remains poorly defined, therapeutic apheresis for AML remains as a recommendation grade 2B by the American Society for Apheresis, there so weak recommendation with moderate quality evidence. The role of leukapheresis as an adjunct therapy is controversial, therefore it is typically reserved for patients with leukostasis who must have induction chemotherapy postponed. It is known that therapeutic apheresis improves tissue perfusion with evidence of rapid reversal pulmonary and central nervous system manifestations, with some theoretical and practical limitations, but it can reduce the rate of early death, although there is no impact on later mortality or long term survival. The WBC can be reduced by 30% to 60% in one single session; these results were seen in both reported cases. **Conclusion:** Therapeutic apheresis is effective in reducing the peripheral blood leukocytes and in preventing leukostasis complications, therefore if facilities are available, it is a temporizing measure for rapid cytoreduction in symptomatic patients, as described through the reported cases.

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ERITROCITAFÉRESE TERAPÊUTICA NA COLESTASE INTRAHEPÁTICA AGUDA EM PACIENTES COM ANEMIA FALCIFORME: RELATO DE DOIS CASOS

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A Colestase Intrahepática Aguda (CIHA) é uma complicação hepática da anemia falciforme, podendo evoluir para disfunção renal e hepática. Classifica-se em leve até grave, com mortalidade de 4% e 64%, respectivamente. A eritrocitaferese é uma modalidade terapêutica utilizada nas complicações falciformes, possuindo maior segurança que a transfusão de troca manual devido a isovolemia no procedimento e resultados mais precisos de hematócrito e Hemoglobina S (HbS). **Objetivos:** Relato de dois casos de CIHA com anemia falciforme e o resultado da terapia com eritrocitaférese. **Métodos:** Trata-se de estudo descritivo, retrospectivo com levantamento dos dados de prontuário eletrônico, após consentimento dos pacientes. **Resultados:** Caso 1 –**:** Masculino, 26 anos, com anemia falciforme e dor abdominal há 3 dias, refratária à analgesia, piora da icterícia, colúria e vômitos. Apresentava-se febril, descorado 2+, ictérico 3+, com dor abdominal difusa e fígado palpável a 3cm. Houve queda da Hb basal para 5,9 g/dL, leucocitose (18.000 mm^3), AST 101 U/L, ALT 44 U/L, FA 206 U/L, GGT 260 U/L, hiperbilirrubinemia com BD 29 mg/dL, PCR: 370 mg/L e DHL 839 U/L. Realizado antibioticoterapia e suporte transfusional na urgência. US abdome com hepatomegalia, sem dilatação ou obstrução das vias biliares. Evoluiu com piora progressiva e indicado eritrocitaférese urgente. HbS basal 86%, com queda para 7,2% após o procedimento. Apresentou queda da BD para 5,4 mg/dL após 5 dias e 2,2 mg/dL, em 15 dias. Caso 2 – Paciente masculino, 33 anos, com anemia falciforme e dor generalizada associada a piora da icterícia e colúria. Evoluiu com rápida piora da hiperbilirrubinemia às custas de BD associado a dispneia. Apresentava-se descorado 2+, ictérico 4+ com abdome pouco doloroso à palpação. À admissão, Hb 5,9 g/dL, leucocitose (20.909 mm^3), AST 484 U/L, ALT 238 U/L, FA 316 U/L, GGT 187 U/L, hiperbilirrubinemia com BD: 47,63 mg/dL e