was discharged on day 10 of treatment and her steroid therapy was tapered and discontinued by day 21. At follow-up on day 21, the patient's hemoglobin had increased to 13.9 g/dL, and no erythrocyte agglutination was observed on peripheral smear. **Conclusion:** This case highlights a rare pediatric presentation of cold agglutinin disease associated with COVID-19 infection, complicated by severe hemolysis and lobar pneumonia. Early recognition and a multidisciplinary approach including corticosteroids and supportive care played a critical role in the patient's favorable outcome.

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CASE REPORT: WIDESPREAD BONE INVOLVEMENT AFTER ALLOGENEIC TRANSPLANTATION IN A PATIENT WITH BIPHENOTYPIC ACUTE LEUKEMIA

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Objective: Biphenotypic acute leukemia (BAL) is a rare hematologic malignancy characterized by blasts expressing both myeloid and lymphoid markers, and is generally associated with poor prognosis. The advancement of cytochemical and immunophenotypic diagnostic techniques has improved recognition of such rare leukemias, which account for approximately 5% of adult acute leukemias. Despite recent developments, challenges remain in the diagnosis and treatment of BAL. The European Group for the Immunological Characterization of Leukemias (EGIL) and the World Health Organization (WHO) scoring systems, primarily based on flow cytometry, are widely used for diagnosis. Due to disease heterogeneity, there is no standardized chemotherapy for BAL; however, because of the high relapse risk, allo-HSCT is recommended as soon as remission is achieved. Following allo-HSCT, extramedullary relapse occurs in 3–12% of acute leukemia patients. In this study, we present a case of BAL with isolated widespread bone involvement occurring after allo-HSCT. **Case report:** A 33-year-old male patient was diagnosed with B/Myeloid biphenotypic acute leukemia in January 2024. Flow cytometric evaluation showed aberrant myeloid markers, while cytogenetic analysis did not reveal FLT3-ITD, t(8;21), t(9;22), or inv(16) mutations. He received induction therapy with 3+7 Idarubicin & Cytarabine, which failed to achieve remission. FLAG-Mito reinduction therapy was administered, but bone marrow evaluation still showed 8% blasts, and the patient was considered refractory. On March 24, 2024, he underwent allo-HSCT from an HLA-matched sibling donor after a myeloablative conditioning regimen with Fludarabine and Treosulfan. Post-transplant chimerism was 96%, and remission was achieved. In December 2024, the patient presented with left knee pain. Imaging revealed a bone lesion in the proximal left tibia, and biopsy confirmed BAL relapse. Bone marrow biopsy was normal. PET-CT revealed widespread skeletal involvement, including bilateral humeri, right clavicle, right scapula, sternum, L2 vertebra, left sixth rib, sacrum, pelvic bones, right femur, and proximal bilateral tibiae. Due to severe pain, palliative radiotherapy (2000 cGy to the left tibia and 800 cGy to the left sixth rib) was administered. As there was no bone marrow involvement, the patient was started on Decitabine (20 mg/m^2/day for 5 days) combined with Venetoclax (200 mg for 14 days per cycle, reduced due to concomitant posaconazole use). After four cycles, PET-CT demonstrated complete remission. Donor lymphocyte infusions (DLI) were administered in four doses (2.42×10^7/kg total). The patient remains in remission with mild chronic GVHD (grade 1–2). **Discussion:** Biphenotypic acute leukemia is a rare subtype of acute leukemia, most commonly presenting with a B/Myeloid phenotype. High-dose chemotherapy protocols derived from ALL or AML regimens are generally used, and allo-HSCT is recommended for patients achieving remission. Extramedullary relapse after allo-HSCT has been reported with variable incidence, most often accompanied by bone marrow relapse. Isolated extramedullary relapse without marrow involvement is rare. A European multicenter study reported isolated extramedullary relapse in 0.65% of cases after allo-HSCT, while another study of 287 patients identified such relapse in approximately 4%, most frequently in the CNS, skin, bone, pelvis, and breast. In our case, the patient relapsed nine months after allo-HSCT with widespread isolated bone involvement. Treatment with hypomethylating agent Decitabine combined with Venetoclax achieved remission, and subsequent DLI helped maintain disease control. There is limited literature regarding isolated bone relapse in BAL after allo-HSCT, highlighting the uniqueness of this case. **Conclusion:** Biphenotypic acute leukemia is a rare disease with poor prognosis and no standardized therapy. Treatment approaches usually involve high-dose chemotherapy regimens for ALL or AML followed by allo-HSCT. Although extramedullary relapse after allo-HSCT is known, isolated widespread bone involvement is extremely rare. Our case demonstrates successful treatment with Decitabine and Venetoclax, followed by donor lymphocyte infusions.

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"Kappa Light-Chain Multiple Myeloma Without Serum M-Spike: A Diagnostic and Therapeutic Challenge in an Elderly Patient"

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Introduction: Light-chain multiple myeloma (LCMM) accounts for a subset of myeloma cases characterized by the absence of an M-protein spike on serum protein electrophoresis. This diagnostic challenge often delays recognition and treatment. We present the case of a 75-year-old woman with kappa-dominant LCMM, where conventional marrow and serum