Chronic myeloid leukemia - STOP TKI - Case report in a 9-year-old boy

Chronic myelogenous leukemia (CML) is relatively rare in children. Treatment is not standardized and often follows guidelines for adults. Because children with CML may receive tyrosine kinase inhibitor (TKI) therapy for many decades, and are exposed to TKIs during a period of active growth, morbidity can be more frequent. We report a case of a 9-year-old boy that presented with pallor and B symptoms. He was observed by his family’s doctor that noticed a hepatosplenomegaly on abdominal palpation, that was confirmed by ultrasound. An analytical study was performed and detected an anemia of 8.2 g/dl and hyperleukocytosis of 33500 / uL. Immunophenotyping of bone marrow demonstrated 7.27% of blasts myeloids. Bone marrow biopsy presented invasion by myeloproliferative neoplasia. Cytogenetic analysis showed translocation (9;22) in 20 metaphases and molecular genetics demonstrated a rearrangement corresponding to the BCR-ABL fusion gene with a relative expression of 43.38% by quantitative RT-PCR. These changes were compatible with the diagnosis of CML. He was started with imatinib 400mg/m2 in October 2011. An optimal response to therapy was observed, however, always with poor tolerance and weight loss, which led to the suspension of imatinib in April 2015. Then he was started on Dasatinib 64 mg/ m2 and presented an optimal response and tolerance during two years. Because he presented a major sustained molecular response during this period it was decided to discontinue dasatinib in May 2017. Currently he is followed monthly, with quantitative RT-PCR performing that shows sustained major molecular response.

Biography
Carolina Maria Costa Pavão has completed her MD with master degree in 2014 from the Faculty of Medicine of the University of Coimbra. Started her residency in clinical hematology in the hematology service of the Hospital do Divino Espírito Santo, Ponta Delgada, Portugal, in January of 2016, being currently attending the third year of her specific five year formation. As part of this programme she completed an internship in oncology pediatrics at Porto Oncology Institute in 2018.

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