4CPS-105 BLINATUMOMAB FOR THE TREATMENT OF THE RELAPSE B-PRECURSOR ACUTE LYMPHOBLASTIC LEUKEMIA IN A PAEDIATRIC PATIENT: A CASE REPORT.

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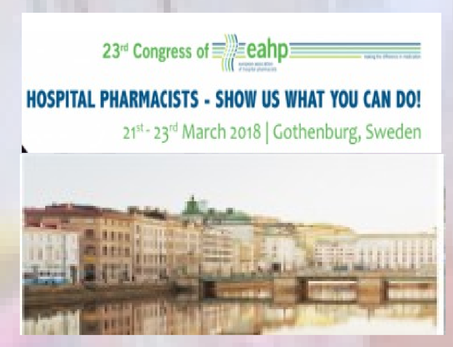
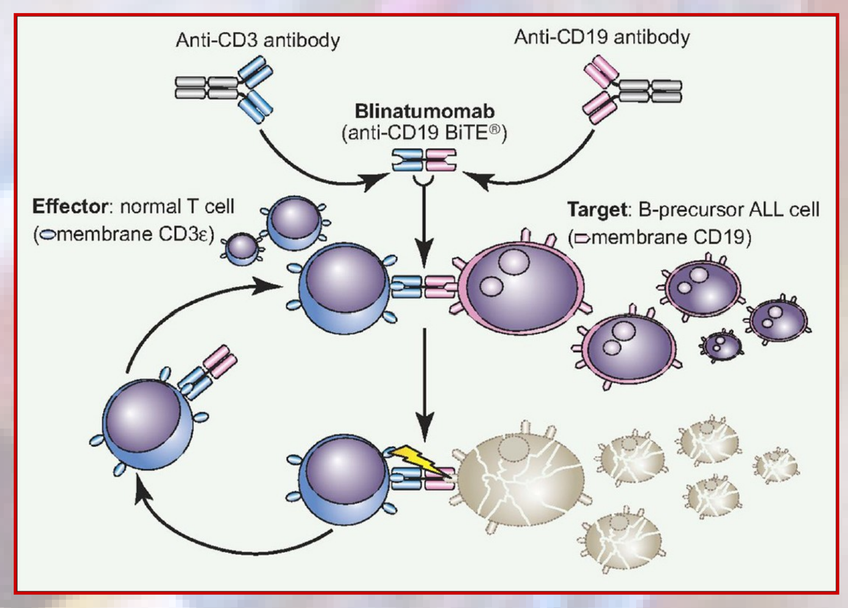


BACKGROUND

Paediatric patients with relapsed B-precursor acute lymphoblastic leukemia (ALL) after hematopoietic stem cell transplantation (HSCT) have a poor prognosis and need to achieve another hematologic remission or very low or negative minimal residual disease (MRD) before proceeding to a subsequent HSCT. Blinatumomab is the first of a new class of bispecific single-chain antibody construct (BiTE) and is indicated for the treatment of adults with Philadelphia chromosome negative relapsed or refractory B-precursor ALL. In Paediatrics, blinatumomab is currently under investigation.



PURPOSE

To describe the efficacy and safety of treatment with blinatumomab in a posttransplant relapsed paediatric case with B-precursor ALL compassionate use.

MATERIAL AND METHODS

Retrospective case report of the use of blinatumomab in a 12-years-old child diagnosed with posttransplant relapsed B-precursor ALL. The data were obtained from the digital clinical history. MRD response was defined as MRD level <10—4 at the end of treatment (MRD quantification by flow cytometry).

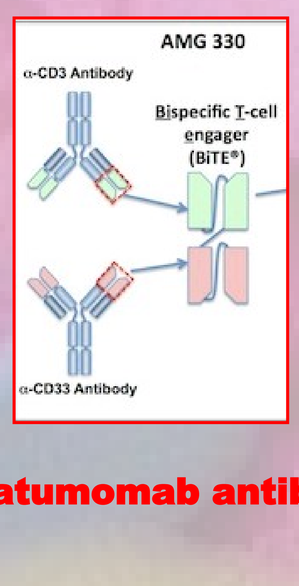
RESULTS

The patient was treated according to ALL SEHOP/PETHEMA-2013 paediatric protocol.

INDUCTION REGIMEN + **INTENSIVE CONSOLIDATION** → **Not achieved MINIMAL RESIDUAL DISEASE (MRD) >0.1%**

TREATMENTS WITH Clofarabine+cytarabine + **CONDITIONING Thiotepa, busulfan, cyclophosphamide** + **Hematopoietic stem cell transplantation (HSCT)** → **Achieved MINIMAL RESIDUAL DISEASE (MRD)**

Eight months later, this patient underwent an isolated bone marrow relapse (MRD=19% and 25% blasts in the bone marrow).



Blinatumomab antibody

Treatments for 2 cycles (28 days each cycle)

Doses:
5mcg/m2 during the first 8 days and15mcg/m2 the rest of the treatment

14-day treatment-free interval per cycle

→ **MRD NEGATIVE AND COMPLETE REMISSION**

CONCLUSION

In this case of a paediatric patient with high risk ALL who relapse after HSCT, the use of blinatumomab was shown to be safe and effective achieving MRD. Nevertheless, more studies are needed to demonstrate its efficacy and safety profile.

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No conflict of interest

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