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Blinatumomab (Blincyto)

Patient MRN: 6745328
Patient DOB: 7-30-2017 (7yo)
Patient Sex: M

OUTPATIENT CLINIC NOTE

HPI:

7 year old male with diagnosis of Philadelphia chromosome-positive B-cell precursor acute lymphoblastic leukemia (B-ALL) presents for a follow up visit to review repeat bone marrow biopsy results from 10/4/24, after completing the consolidation phase (see patient's detailed standard treatment plan below).

The bone marrow aspirate revealed >90% blasts, indicated relapsed or refractory B-ALL.

The patient has otherwise been doing well clinically. Parents report that the patient has had mild fatigue and decreased energy, but is overall well appearing with no recent fevers.

Diagnosis: A bone marrow biopsy on 3/29/24 confirmed a diagnosis of B-ALL with 85% lymphoblasts. Cytogenetic analysis indicated Philadelphia chromosome-positive disease.

Completed Treatment Plan

Induction Phase:

Duration: 4 weeks (4/1/24 - 4/29/24)
Agents Used:

- **Vincristine:** Administered weekly.
- **Dexamethasone:** Administered daily for 28 days.
- **L-asparaginase:** Administered on alternate days.
- **Daunorubicin:** Given as a single dose during the first week.
- **Imatinib:** Administered daily throughout the induction phase to target the BCR-ABL fusion protein.

Consolidation Phase:

Duration: 8 weeks (5/6/24 - 7/1/24)
Agents Used:

- **Methotrexate:** High-dose, given weekly.
- **Mercaptopurine:** Daily oral administration.
- **Vincristine:** Administered biweekly.
- **Cyclophosphamide:** Given during the third week.
- **Doxorubicin:** Administered during the final week of consolidation.
- **Imatinib:** Continued daily administration throughout consolidation to maintain suppression of BCR-ABL.

Initial Proposed Maintenance Phase:

Started: 7/8/24
Agents:

- **Methotrexate:** Weekly doses.
- **Mercaptopurine:** Daily oral administration.
- **Vincristine:** Every 4 weeks.
- **Imatinib:** Continued daily administration during maintenance to prevent relapse.
- **Intrathecal Methotrexate:** Plan to administer every 2-3 months for CNS prophylaxis. First dose scheduled for 10/4/24 at the time of the repeat bone marrow biopsy.

Review of Systems:
General: Negative for fever, pallor. Positive for fatigue
Skin: Negative for rashes
Head, Eyes, Ears, Nose, Throat (HEENT): Negative for headache, vision changes, nasal congestion, rhinorrhea, sore throat.
Cardiovascular: Negative for chest pain, palpitations
Respiratory: negative for cough, shortness of breath, wheezing.
Gastrointestinal: Negative for abdominal pain, nausea, vomiting.
Genitourinary: Negative for dysuria, frequency, urgency, hematuria.
Musculoskeletal: Negative for joint pain, stiffness, muscle weakness.
Neurological: Negative for seizures, weakness, numbness.
Endocrine: Negative for heat/cold intolerance, excessive thirst or urination, changes in appetite.

Hematologic: Negative for rashes, bruises, petechiae or purpura
Psychiatric: Negative for depression, anxiety

Vitals:
HR 95 bpm
BP 110/70 mmHg
RR: 18 bpm
Temp: 98.7°F (37°C)

Physical Exam
General Appearance: No acute distress, laying in bed comfortably
Skin: Normal, without rashes or bruises
Head: Normocephalic, atraumatic.
Eyes: Pupils equal, round, reactive to light; conjunctivae clear.
Ears: External ears normal; tympanic membranes intact
Nose: Nasal passages clear; no discharge.
Throat: Oral mucosa moist; tonsils non-enlarged, no erythema.
Cardiovascular: Normal rate, regular rhythm; no murmurs, gallops, or rubs.
Respiratory: Clear bilaterally, no wheezing or crackles. No use of accessory muscles, unlabored breathing.
Gastrointestinal: Abdomen soft, non-tender, no distension; bowel sounds present. No hepatosplenomegaly.
MSK: No joint pain, normal range of motion.
Neurological: Alert, oriented. At baseline.

Assessment: 7-year-old male with a diagnosis of philadelphia chromosome positive B-cell precursor acute lymphoblastic leukemia (B-ALL), diagnosed 2 years ago. He was previously treated with a standard chemotherapy regimen and has achieved remission. Recent bone marrow biopsy revealed relapsed or refractory B-ALL given >90% blasts present, despite current maintenance therapy including imatinib.

Plan:

1. **Initiate Blinatumomab therapy along with re-induction phase and continued imatinib.**
2. **Schedule biweekly visits for monitoring during treatment with Blinatumomab, including routine CBCs and assessments for adverse effects.**

3. **Education materials on Blinatumomab and salvage therapy to be provided to the family.**