Pola-R-CHP - Polatuzumab Vedotin 1.8 / Rituximab 375 / Cyclophosphamide 750 / Doxorubicin 50 / Prednisolone 100, diffuse large B-non-Hodgkin Lymphoma, cycle 1-6

Protocol-ID: 1920 V1.0 (Standard), Pola-R-CHP (POLVED1.8/RITU375/CYCL750/DOXO50/PRED100), DLBCL, C1-6

Indication(s)

- NHL, B-Cell Type, Diffuse Large Cell; ICD-10 C83.3

Protocol classification

- Classification: current standard
- Intensity: Standard dose
- Therapy mode: First line
- Therapy intention: curative

Cycles

Cycle length 21 days, recommended cycles: 6

Protocol sequences

- POLARIX: Pola-R-CHP (POLVED1.8/RITU375/CYCL750/DOXO50/PRED100), DLBCL, C1-6 (PID1920) -|- RITU375, C7-8 (PID1921)

Risks

- Emetogenicity (MASCC/ESMO): moderate (30-90%)
- Neutropenia: very high (>41%)
- Febrile Neutropenia: high (>20%)
- Anemia Hb below 8g/dl: moderate (6-15%)
- Diarrhea: CTC AE °1-2: 27%; °3-4: 4%
- Headache: CTC AE °1-2: 12%; °3-4: 1%
- Neuropathy: CTC AE °1-2: 52%; °3-4: 2%
- Asthenia: CTC AE °1-2: 10%; °3-4: 2%
- Constipation: CTC AE °1-2: 28%; °3-4: 1%
- Pyrexia: CTC AE °1-2: 14%; °3-4: 2%

Therapy

Hydration: Balanced Crystalloid Solution **HYD**

Access: peripheral venous

Hydration before, during, or after antitumor therapy

Day	Substance	Dosage	Solution	Appl.	Inf. time	Procedure
1	**Balanced Crystalloid Solution**	500 ml		i.v.	60 min	60 min before Polatuzumab Vedotin

Antiemesis: Emetogenicity moderate, GRAN i.v., DEXA i.v. **AE**

Access: peripheral venous

ASCO 2015, DGHO 2016, DKG 2016, MASCC/ESMO 2016, if palonosetron not available

Day	Substance	Dosage	Solution	Appl.	Inf. time	Procedure
1	**Granisetron**	1 mg	NaCl 0.9% 50 ml	i.v.	5 min	15 min before Cyclophosphamide (d1)

or other 5-HT3 receptor antagonist

Allergy prophylaxis: Rituximab (paracetamol, Dimetinden, Prednisolone i.v.) **AP**

Access: peripheral venous

Day	Substance	Dosage	Solution	Appl.	Inf. time	Procedure
1	**Paracetamol**	1000 mg		p.o.		60 min before Polatuzumab Vedotin
1	**Dimetinden**	4 mg	NaCl 0.9% 50 ml	i.v.	5 min	30 min before Polatuzumab Vedotin
1	**Prednisolone**	100 mg	NaCl 0.9% 50 ml	i.v.	15 min	60 min before Polatuzumab Vedotin

Supportive therapy: Mesna i.v., hour 0 (pre), p.o. 2 h, 6 h after onset Cyclophosphamide **SUP**

Access: peripheral venous

Mesna 0h,2h,6h, prophylaxis of urinary tract toxicity by Cyclophosphamide. At the time of oxazaphosphorin injection, 20% of the oxazaphosphorin dose is injected simultaneously as Mesna. 2 and 6 h after onset, oral Medication of 40% of the oxazaphosporin dose, summary of product characteristics.

Day	Substance	Dosage	Solution	Appl.	Inf. time	Procedure
1	**Mesna**	150 mg/m² BSA		i.v.	1 min	1 min before Cyclophosphamide (d1)
1	**Mesna**	300 mg/m² BSA		p.o.		1 h after Cyclophosphamide (d1)
1	**Mesna**	300 mg/m² BSA		p.o.		5 h after Cyclophosphamide (d1)

Antineoplastic therapy: Pola-R-CHP **CTX**

Access: central venous

Day	Substance	Dosage	Solution	Appl.	Inf. time	Procedure
2-5	**Prednisolone**	100 mg		p.o.		1-0-0-0
1	**Polatuzumab vedotin**	1.8 mg/kg bw	NaCl 0.9% 150 ml	i.v.	90 min	Sequence
If the previous infusion was well tolerated, the subsequent dose of polatuzumab vedotin may be administered as a 30-minute infusion.						
1	**Rituximab**	375 mg/m² BSA	NaCl 0.9% 500 ml	i.v.	4 h	Sequence
Init. Infusion rate 50mg/h; it can be increased by 50mg/h every 30min to max. 400mg/h. Further infusions: init. Infusion speed 100mg/h, which can be increased by 100mg/h every 30min to max. 400mg/h.						
1	**Cyclophosphamide**	750 mg/m² BSA	NaCl 0.9% 500 ml	i.v.	1 h	Sequence
1	**Doxorubicin**	50 mg/m² BSA	Dextrose 5% 250 ml	i.v.	30 min	Sequence

Hematopoietic growth factors: FN risk above 20%, G-CSF long-acting, pegylated **HW**

Access: - none -

Risk of febrile neutropenia (FN) >20%, ASCO 2015, DKG 2016

Day	Substance	Dosage	Solution	Appl.	Inf. time	Procedure
2	**Pegfilgrastim**	6 mg		subc	Bolus	24 h after Doxorubicin (d1)

or other long-acting G-CSF

Substance links

Links to substances are found here.

Concomitant therapy supplements

Prednisolone in allergy prophylaxis is equivalent to Prednisolone in day 1 therapy.

Warnings

If an infusion-related reaction occurs in a patient, slow the infusion rate of Polatuzumab Vedotin or discontinue use. Discontinue use immediately and permanently if a life-threatening reaction occurs in a patient.
Doxorubicin: increased risk of cardiomyopathy, maximum cumulative dose 450-550 mg/m² KOF. In mediastinal irradiation, arterial hypertension for more than 5 years, age over 70 years or previous cardiac damage, maximum 400 mg/m².
For DOXO extravasation: dry cold (not just before or after Dexrazoxane infusion) on day of extravasation. Dexrazoxane i.v. for 3 days: 2 days 1000 mg/m², 3rd day 500 mg/m², do not use in parallel with DMSO. First infusion as soon as possible and within the first 6 hours.

Notes

Patients shall be monitored for infusion-related reactions/hypersensitivity reactions during the infusion of polatuzumab vedotin and for at least 90 minutes after completion of the initial dose. If the prior infusion was well tolerated, monitor patients during the infusion and for at least 30 minutes after completion of the infusion.
Dexamethasone for antiemesis on days 2-3 covered by prednisolone of antitumor therapy.
The combination of an anthracycline and cyclophosphamide may be highly emetogenic in individual patients and require the addition of a neurokinin receptor antagonist. In this case, attention must be paid to the increase in plasma concentration of prednisolone and this may need to be adjusted.
Observe tumor lysis syndrome risk classification according to Cairo 2010; for LDH elevation without tumor bulk, use protocol "Tumor lysis syndrome prophylaxis, intermediate risk". In case of LDH elevation above two times the upper limit and tumor-bulk protocol use "tumor lysis syndrome prophylaxis, high risk".

Controls:

- Blood count: 1x weekly
- Echocardiography, ECG, chest X-ray Cardiotoxicity of doxorubicin, review of cardiac function before/under therapy recommended.
- Hepatitis B (HBV) Test: HBsAg and anti-HBc Rituximab: Hep-B reactivation possible. If Hep-B serology is positive, initiate measures to prevent hepatitis B reactivation.
- IgG Rituximab: Risk of Infection: It is recommended that immunoglobulin levels be determined prior to initiating treatment with rituximab.
- Day 1: Na^+, K^+, Ca^{2+}, Mg^{2+}
- Day 1: Creatinine, glomerular filtration rate (GFR)
- Day 1: GOT, GPT, GGT, Bilirubin, AP, Cholinesterase
- Day 1: Urine status

Original author

Tilly H (2021)

Origin

Centre Henri-Becquerel, Rouen Cedex, France, POLARIX trial

References

- Tilly H, Polatuzumab Vedotin in Previously Untreated Diffuse Large B-Cell Lymphoma. N Engl J Med 2022 Jan 27;386(4):351-363. doi: 10.1056/NEJMoa2115304. PMID: 34904799. [PMID]

Recommendations

- 04/2024: National Comprehensive Cancer Network

Important notice

Diagnosis, indication for therapy and treatment of malignant diseases must be carried out in each individual case by the hematologist and oncologist on his or her own responsibility. The treating physician is obligated to this personal responsibility to weigh in each case before a diagnostic or therapeutic measure, indication, contraindications, dosage and application under consideration of the specialized information or other documents of the manufacturers. This applies in particular to rarely used preparations or preparations that are new to the market.