LETTER TO THE EDITOR

Local cytokine release syndrome with cervical angioedema following CAR-T cell therapy

Authors

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https://doi.org/10.3324/haematol.2026.300481

Received: January 10, 2026.
Accepted: April 14, 2026.
Early view: April 23, 2026.

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Local cytokine release syndrome with cervical angioedema following CAR-T cell therapy- Supplementary data

Supplementary Table S1. Patient Demographics and Disease Characteristics in patients with L-CRS from the 2-center cohort and from literature review (n=22)

Case	Age/Sex	Disease	CAR-T	Bridging	Ref
1	68/F	DLBCL	Axi-cel	GEMOX	-
2	76/F	DLBCL	Axi-cel	HD-MTX	-
3	71/M	DLBCL	Axi-cel	GEMOX	-
4	62/M	FL	Tisa-cel	None	-
5	69/M	MM	Ide-cel	None	-
6	45/F	MM	Ide-cel	None	-
7	45/F	FL→DLBCL	Axi-cel	RT	-
8	66/M	FL→DLBCL	Axi-cel	GEMOX	-
9	61/F	B-ALL	CD19 CAR-T	Dasatinib+VP	4
10	60/M	DLBCL (ref)	Tisa-cel	Pola-BR+RT	5
11	70/M	DLBCL (rel)	Tisa-cel	R-GCD	5
12	20/F	B-ALL	Tisa-cel	Not clear	6
13	75/M	DLBCL	Liso-cel	Pola-BR+CHASER	7
14	73/M	DLBCL	Liso-cel	R-DEVIC	7
15	71/F	DLBCL	Tisa-cel	Pola-BR	7
16	64/M	DLBCL	Tisa-cel	RT+Pola-BR	8
17	59/F	FL→DLBCL	Tisa-cel	R-ESHAP	8
18	65/F	MM	Ide-cel	Carfilzomib+dexa	9
19	65/M	MM	Ide-cel	Carfilzomib+dexa	9
20	54/F	MM	Ide-cel	RT	10
21	15/M	B-cell precursor ALL	Tisa-cel	Inotuzumab+imatinib	11
22	67/F	FL→DLBCL	Tisa-cel	Pola-BR	12

Cases 1–8: Institutional cohort; Cases 9–22: Literature cohort. Abbreviations: DLBCL = diffuse large B-cell lymphoma; FL = follicular lymphoma; MM = multiple myeloma; B-ALL = B-cell acute lymphoblastic leukemia; ref = refractory; rel = relapsed; Axi-cel = axicabtagene ciloleucel; Tisa-cel = tisagenlecleucel; Liso-cel = lisocabtagene maraleucel; Ide-cel = idecabtagene vicleucel; HD-MTX = high-dose methotrexate; GEMOX = gemcitabine + oxaliplatin; RT = radiotherapy; Pola-BR = polatuzumab + bendamustine + rituximab; VP = vincristine + prednisone; dexa = dexamethasone. R-GCD=Rituximab, Gemcitabine, Carboplatin, and Dexamethasone; CHASER=Cyclophosphamide, High-dose Cytarabine, Dexamethasone, Etoposide, and Rituximab; R-DeVIC= Rituximab, Dexamethasone, Etoposide, Ifosfamide and Carboplatin; R-ESHAP= Etoposide, Methylprednisolone Cytarabine and Cisplatin.

Supplementary Table S2. Baseline characteristics of the two-center institutional CAR-T cohort (n = 173)

Characteristic	Overall cohort (n = 173)	L-CRS (n = 8)	No L-CRS (n = 165)
Demographics			
Median age, years (range)	65.2 (range 19-86)	67 (range 45–76)	65.0 (range 19-86)
Female sex, n (%)	78 (45.1%)	4 (50.0%)	74 (44.8%)
Male sex, n (%)	95 (54.9%)	4 (50.0%)	91 (55.2%)
Underlying disease, n (%)			
DLBCL‡	124 (71.7%)	5 (62.5%)	119 (72.1%)
Mantle cell lymphoma	14 (8.1%)	0 (0.0%)	14 (8.5%)
Follicular lymphoma	13 (7.5%)	1 (12.5%)	12 (7.3%)
High-grade B-cell lymphoma	8 (4.6%)	0 (0.0%)	8 (4.8%)
PMBCL	6 (3.5%)	0 (0.0%)	6 (3.6%)
B-ALL	5 (2.9%)	0 (0.0%)	5 (3.0%)
Multiple myeloma	2 (1.2%)	2 (25.0%)	0 (0.0%)
B-cell lymphoblastic lymphoma	1 (0.6%)	0 (0.0%)	1 (0.6%)
CAR-T product, n (%)			
Axicabtagene ciloleucel (axi-cel)	123 (71.1%)	5 (62.5%)	118 (71.5%)
Tisagenlecleucel (tisa-cel)	38 (22.0%)	1 (12.5%)	37 (22.4%)
Brexucabtagene autoleucel (brexu-cel)	10 (5.8%)	0 (0.0%)	10 (6.1%)
Idecabtagene vicleucel (ide-cel)	2 (1.2%)	2 (25.0%)	0 (0.0%)

Abbreviations: DLBCL, diffuse large B-cell lymphoma; PMBCL, primary mediastinal B-cell lymphoma; B-ALL, B-cell acute lymphoblastic leukemia; L-CRS, local cytokine release syndrome.

‡ Includes 2 cases of FL transformation to DLBCL (both in the L-CRS group).

No formal statistical comparisons were performed given the small number of L-CRS events (n = 8).

Supplementary Figure S1. Computerized tomography images demonstrating rapidly progressing, pending airway obstruction in a patient with L-CRS from our cohort.

Panel A shows an axial view at the level of the oropharynx; Panel B shows an axial view at a lower cervical level demonstrating narrowing of the airway lumen. Symptoms resolved after steroid administration without reaching intubation.

A



B

