TRIUMPH OF DARBEPOETIN ALFA IN NAVIGATING CHEMOTHERAPY-INDUCED ANEMIA: A COMPREHENSIVE REAL-WORLD STUDY FROM THE INDIAN SUBCONTINENT

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Background

Chemotherapy Induced Anemia (CIA), a common comorbidity in advanced solid tumor malignancies impacting the quality of life (QoL) leads to poor disease outcomes. Darbepoetin alfa (DA; Cresp®) is approved for the management of CIA in a palliative setting. We retrospectively analysed real world effectiveness & tolerability of DA (Cresp®) in CIA in 523 patients from a single centre in India.

Materials & Methods

Study setting: Narayana Superspeciality Hospital, Kolkata, India | **Study time-period:** 01/09/2017 to 31/08/2023

Patient Eligibility

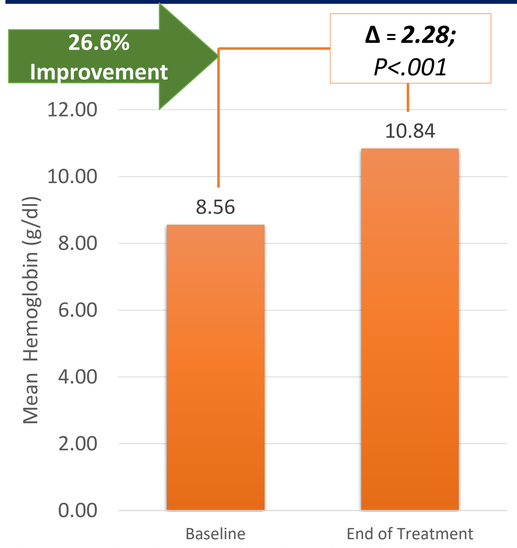
≥ 18 yrs	Metastatic/advanced solid tumor	≥2 myelosupressive chemotherapy cycles	Palliative setting	Clinical/lab CIA diagnosis	≥1 DA (Cresp®; 200 µg, sc, biw) dose

Outcomes

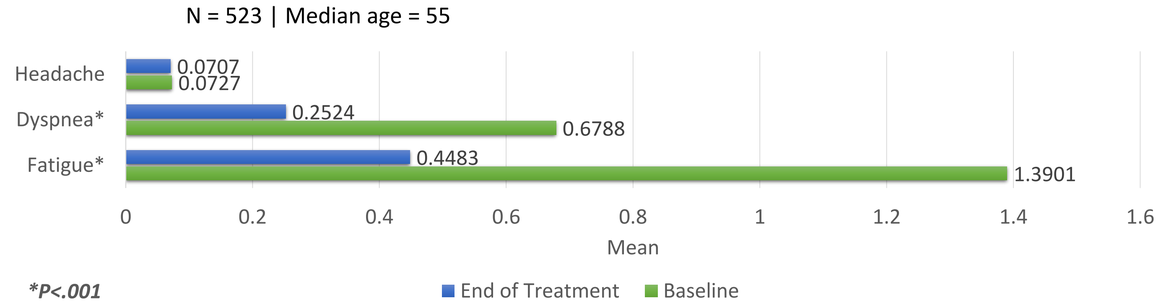
- **Effectiveness**
  - Change in Hemoglobin (Hb) Levels
  - Change in need for Blood Transfusion (BT)
  - Change in Patient-reported outcomes (PRO)
- **Tolerability**
  - Incidence of Treatment emergent adverse events (TEAE)

- *Baseline Hb refers to Hb at time of CIA diagnosis.*
- *End of treatment Hb was the last recorded Hb before data cut-off.*
- *Baseline BT requirement was defined as per the NCCN guidelines.*
- *PROs for headache, fatigue, & dyspnea were evaluated using a scale rating each category from 0-3, with mean scores assessed at baseline and end of treatment.*

Results



Improvement in Hb Levels from Baseline to End of Treatment



Occurrence of Patient-reported Outcomes at Baseline and the End of treatment

Independence from BT	N	%
Patients requiring BT at baseline	50	9.6
Patients receiving BT	31	5.9
DA (Cresp®) decreasing risk of BT	19/50 (0.38)	38
DA (Cresp®) preventing BT	28 / 50 (0.44)	44

TEAEs	N	%
Hypertension	28	5.4%
Deep vein thrombosis	15	2.9%
Arrhythmia	4	0.8%
Congestive cardiac failure	1	0.2%
Hypotension	1	0.2%

Mean Hb increment in Sub-groups*		
Cancer site	**N (%)**	**Hb (Mean ± SD)**
Gastrointestinal	167 (31.93)	2.38 ± 0.97
Breast	85 (16.25)	2.29 ± 0.62
Gynecological	79 (15.11)	2.19 ± 0.69
Genitourinary	58 (11.09)	2.17 ± 0.72
Lung	55 (10.52)	2.36 ± 0.52
Head and neck squamous cell carcinoma	33 (6.31)	2.38 ± 0.74
Others	46 (8.80)	2.00 ± 0.76
Chemotherapy agents		
Single	133 (25.43)	2.35 ± 0.76
Multiple	390 (74.57)	2.25 ± 0.79
Chemotherapy types		
Taxane + Platinum	120 (22.94)	2.26 ± 0.67
Gemcitabine + Platinum	95 (18.16)	2.30 ± 0.93
Fluoropyrimidine - based	86 (16.44)	2.31 ± 0.85
Single-Agent Taxane	67 (12.81)	2.39 ± 0.71
Platinum + Other Agent/ Platinum Mono	41 (7.84)	2.12 ± 0.86
Taxane + Other Agent	33 (6.31)	2.49 ± 0.64
Pemetrexed/Methotrexate -based	23 (4.40)	2.49 ± 0.65
Anthracycline - based	17 (3.25)	1.95 ± 0.88
Others	41 (7.84)	2.03 ± 0.68
Use of Platinum agents		
Platinum	354 (67.69)	2.27 ± 0.82
Non-Platinum	169 (32.31)	2.29 ± 0.71
Response to therapy		
Partial Response	307 (58.70)	2.66 ± 0.51
Stable Disease	159 (30.40)	1.86 ± 0.82
Progression of Disease	57 (10.90)	1.40 ± 0.59
No. of doses of Darbepoetin alfa		
4 Doses	59 (11.28)	1.61 ± 0.67
5 Doses	22 (4.21)	2.26 ± 0.54
6 Doses	14 (2.68)	2.54 ± 1.11
8 Doses	428 (81.84)	2.36 ± 0.76

**P<0.001*

Conclusion

This is the largest retrospective analysis of DA (Cresp®) in Indian patients to our knowledge. There was significant improvement in Hb levels across all sub-groups. Patients in partial response had greatest increment in Hb levels followed by stable disease, & least increment noted in those with disease progression. DA (Cresp®) decreased/prevented BT requirement, improved PROs, thereby enhancing QoL. There were no new safety signals apart from those already reported in literature.