

Post Stroke Management with IHD and CKD

Patient Overview

Mr. W is a 60-year-old Chinese male with a history of **stroke**, **post CABG**, and **chronic kidney disease**. He is currently receiving **CRT** treatment.

Treatment Timeline

- **05.06.21** — Started **CRT-REDOX**.
- **24.09.21** — Started **CRT-LIPON**.
- **02.07.21** — Started **CRT-LUMINA**.
- **CRT-3C** — Completed 1 full cycle of all 3 CRT types with full stroke recovery.
- **Current phase** — Continued on maintenance phase with monthly **CRT-REDOX** and **CRT-LIPON**.

Current Status

- **Stroke recovery** — Recovered fully from the post-stroke condition after 1 cycle of CRT-3C.
- **Treatment regimen** — On maintenance phase of CRT-REDOX and CRT-LIPON, given once monthly.
- **Kidney function** — Improved and maintained.
- **Overall condition** — Currently doing well.

Treatment Documentation

The tables below summarize treatment visits, dosing schedules, laboratory findings, and clinical progress.

CRT-LIPON X CRT-LUMINA X CRT-REDOX X CRT-REDOX X (1) CRT-REDOXIL X FRT LAB TEST X UFEME + U-CS													
Type of Immunisation	DOSE 1	DOSE 2	DOSE 3	DOSE 4	DOSE 5	DOSE 6	DOSE 7	DOSE 8	DOSE 9	DOSE 10	DOSE 11	DOSE 12	
1-C	05/06/21	11/06/21	18/06/21	25/06/21	02/07/21 As Redoxil x	09/07/21 As Redoxil x	16/07/21 As Redoxil x	23/07/21 As Redoxil x	30/07/21 As Redoxil x	06/08/21 As Redoxil x	13/08/21 As Redoxil x	20/08/21 As Redoxil x	
2-C	27/08/21 As Redoxil x	03/09/21 As Redoxil x	10/09/21 As Redoxil x	17/09/21 As Redoxil x	24/09/21	08/10/21	22/10/21	22/11/21	10/12/21	14/01/22	18/02/22	07/03/22	
3-C	25/03/22	08/04/22	22/04/22	06/05/22	23/05/22	13/06/22	04/07/22	21/07/22	04/08/22	18/08/22	01/09/22	15/09/22	
4-C	30/09/22	14/10/22	27/10/22	24/11/22	23/12/22	19/01/23	24/02/23	24/03/23	05/05/23	12/06/23	31/07/23	06/09/23	
5-C	06/10/23	16/11/23	19/12/23	17/01/24	22/02/24	29/03/24	02/05/24	10/06/24	12/07/24	23/08/24	30/09/24	25/11/24	

CRT-LIPON X	CRT-LUMINA X	CRT-REDOX X	CRT-REDOX X (1)	CRT-REDOXIL X	FRT	LAB TEST X	UFEME + U-CS									
Type of Immunisation		DOSE 1	DOSE 2	DOSE 3	DOSE 4	DOSE 5	DOSE 6	DOSE 7	DOSE 8	DOSE 9	DOSE 10	DOSE 11	DOSE 12			
▶	1-C	20/12/24	21/01/25	26/02/25	04/04/25	09/05/25	09/06/25	15/07/25	26/08/25	26/09/25	11/11/25	10/12/25	14/01/26			
	2-C	03/03/26	29/04/26	29/05/26	30/06/26	07/08/26										
	3-C															
	4-C															
	5-C															

Table 1.1: CRT-REDOX Treatment Record

CRT-LIPON X	CRT-LUMINA X	CRT-REDOX X	CRT-REDOX X (1)	CRT-REDOXIL X	FRT	LAB TEST X	UFEME + U-CS							
Type of Immunisation		DOSE 1	DOSE 2	DOSE 3	DOSE 4	DOSE 5	DOSE 6	DOSE 7	DOSE 8	DOSE 9	DOSE 10	DOSE 11	DOSE 12	
▶	1-C	24/09/21	08/10/21	22/10/21	22/11/21	10/12/21	27/12/21	14/01/22	18/02/22	07/03/22	25/03/22	08/04/22	22/04/22	
	2-C	23/12/22	19/01/23	24/02/23	24/03/23	05/05/23	12/06/23	31/07/23	06/09/23	06/10/23	16/11/23	19/12/23	17/01/24	
	3-C	22/02/24	29/03/24	02/05/24	10/06/24	12/07/24	23/08/24	30/09/24	25/11/24	20/12/24	21/01/25	26/02/25	04/04/25	
	4-C	09/05/25	09/06/25											
	5-C													

Table 1.2: CRT-LIPON Treatment Record

CRT-LIPON X	CRT-LUMINA X	CRT-REDOX X	CRT-REDOX X (1)	CRT-REDOXIL X	FRT	LAB TEST X	UFEME + U-CS										
Type of Immunisation		DOSE 1	DOSE 2	DOSE 3	DOSE 4	DOSE 5	DOSE 6	DOSE 7	DOSE 8	DOSE 9	DOSE 10	DOSE 11	DOSE 12				
▶	1-C	02/07/21 As Redoxil x	09/07/21 As Redoxil x	16/07/21 As Redoxil x	23/07/21 As Redoxil x	30/07/21 As Redoxil x	06/08/21 As Redoxil x	13/08/21	20/08/21 As Redoxil x	27/08/21 As Redoxil x	03/09/21 As Redoxil x	10/09/21 As Redoxil x	17/09/21 As Redoxil x				
	2-C	15/07/25	26/08/25	26/09/25	11/11/25	10/12/25	14/01/26	03/03/26	29/04/26	29/05/26	30/06/26	07/08/26					
	3-C																
	4-C																
	5-C																

Table 1.3: CRT-LUMINA Treatment Record

centre	KDK - CP	IJN	KDK - CP	KDK - CP	KDK - CP	IJN	GN
test	29.05.21	16.06.21	02.07.21	30.07.21	27.08.21	22.09.21	Normal Range
UREA	10.6	12.1	11.8	11.4	13.6	9.0	2.8-7.2
CREATININE	186	169	169	164	172	140	54-104
e-GFR	33	36	36	38	36	45	>60
URIC ACID	480	357	500	480	420	412	208-428
SODIUM	135	139	142	137	133	142	136-146
POTASSIUM	4.9	4.0	4.1	3.9	4.4	4.5	3.5-5.1
CHLORIDE	97	-	107	105	96	-	101-109
CALCIUM	2.4	-	-	-	-	-	2.20-2.65
CORRECTED CALCIUM	2.5	-	-	-	-	-	2.1-2.6
PHOSPHORUS	-	-	-	-	-	-	0.81-1.45
MAGNESIUM, SERUM	-	-	-	-	-	-	0.73-1.06
Urine Albumin	-	-	-	-	-	-	<20
Urine Creatinine	-	-	-	-	-	-	0.9-26.5
ACR	-	-	-	-	-	-	<3.4
UTI Status	-VE	-	-	-	-	-	
CRT-REDOX+	BL	-	D5	D9	D13	-	
CRT-LIPON	BL	-	-	-	-	-	
CRT-LUMINA	BL	-	D1	D5	D9	-	
centre	KDK-GB	KDK-GB	KDK-GB	PPUM	KDK-GB	KDK-GB	GN
test	10.12.21	14.01.22	18.02.22	21.03.22	22.04.22	23.05.22	Normal Range
UREA	14.2	10.7	11.3	8	7.7	10.2	2.8-7.2
CREATININE	168	143	144	141	141	139	54-104
e-GFR	39	47	46	47	48	48	>60
URIC ACID	411	390	380	353	350	370	208-428
SODIUM	141	142	142	138	140	141	136-146
POTASSIUM	5.8	5.4	4.6	4.5	5.5	5.3	3.5-5.1
CHLORIDE	102	104	105	105	-	104	101-109
CALCIUM	-	-	-	2.39	-	-	2.20-2.65
CORRECTED CALCIUM	-	-	-	-	-	-	2.1-2.6
PHOSPHORUS	-	-	-	1.54	-	-	0.81-1.45
SERUM	-	-	-	-	-	-	0.73-1.06
Urine Albumin	69.8	257.3	320.7	0.83	310.2	291.4	<20
Urine Creatinine	2.72	8.61	8.85	12.418	10.85	10.75	0.9-26.5
ACR	25.7	29.9	36.2	66.8	28.6	27.1	<3.4
UTI Status	-	-	-	-VE	-	-	
CRT-REDOX+	D21	D22	D23	-	D27	D29	
CRT-LIPON	D5	D7	D8	-	D12	D12	
CRT-LUMINA	D12	D12	D12	-	D12	D12	

Table 2.1: Real-Time Laboratory Results (Part 1)

centre	IJN	PPUM	KDK-GN	KDK-GN	PPUM	KDK-GN	GN
date	29.06.22	12.07.22	01.09.23	19.01.23	03.05.23	06.10.23	Normal Range
test							
UREA	9.5	10.7	8.8	9.1	11.7	8.3	2.8-7.2
CREATININE	153	173	136	135	135	133	54-104
e-GFR	41	37	50	50	49	48	>60
URIC ACID	378	433	340	397	411	423	208-428
SODIUM	140	137	138	138	139	133	136-146
POTASSIUM	4.5	4.3	4.6	4.1	4.3	5.7	3.5-5.1
CHLORIDE	-	102	105	108	107	102	101-109
CALCIUM	-	2.47	-	-	2.32	-	2.20-2.65
CORRECTED CALCIUM	-	-	-	-	-	-	2.1-2.6
PHOSPHORUS	-	1.6	-	-	1.41	-	0.81-1.45
MAGNESIUM, SERUM	-	-	-	-	-	-	0.73-1.06
Urine Albumin	-	0.42	203.7	129.8	0.55	150.4	< 20
Urine Creatinine	-	15.485	13.1	11.4	14.567	12.2	0.9-26.5
ACR	-	27.1	15.5	11.4	37.8	12.3	<3.4
UTI Status	-	-VE	-	-	-	-VE	
CRT-REDOX+	-	-	D35	D42	-	D49	
CRT-LIPON	-	-	D12	D14	-	D21	
CRT-LUMINA	-	-	D12	D12	-	D12	
centre	PPUM	PPUM	IJN	PPUM	KDK-GN	PPUM	GN
date	16.10.23	06.05.24	07.08.24	11.11.24	09.06.25	27.10.25	Normal Range
test							
UREA	9.8	9.1	6.7	9.7	6.3	7.8	2.8-7.2
CREATININE	127	123	143	129	127	135	54-104
e-GFR	53	55	44	52	55	55	>60
URIC ACID	428	-	352	-	371	-	208-428
SODIUM	140	136	140	138	138	140	136-146
POTASSIUM	4	4.4	4.7	4.4	4.3	4.4	3.5-5.1
CHLORIDE	106	108	-	105	105	104	101-109
CALCIUM	2.38	2.35	-	-	-	2.40	2.20-2.65
CORRECTED CALCIUM	-	-	-	-	-	-	2.1-2.6
PHOSPHORUS	1.49	-	-	-	-	1.40	0.81-1.45
MAGNESIUM, SERUM	-	-	-	-	-	-	0.73-1.06
Urine Albumin	189.0	80.0	-	-	-	111.0	< 20
Urine Creatinine	13.747	9.843	-	-	-	13.605	0.9-26.5
ACR	13.7	8.1	-	-	-	8.2	<3.4
UTI Status	-VE	-VE	-	-VE	-VE	-VE	
CRT-REDOX+	-	-	-	-	D66	-	
CRT-LIPON	-	-	-	-	D38	-	
CRT-LUMINA	-	-	-	-	D12	-	

Table 2.2: Real-Time Laboratory Results (Part 2)

e-GFR categories in CKD

GFR category	GFR (ml/min/1.73 m ²)	Terms
G1	> 90	Normal / High
G2	60 - 89	Mildly decreased
G3a	45 - 59	Mildly to moderately decreased
G3b	30 - 44	Moderately to severely decreased
G4	15 - 29	Severely decreased
G5	< 15	Kidney failure

Urine MicroAlbumin

Male - 2.5 - 25.0 mg/mmol

Female - 3.5 - 25.0 mg/mmol

*value >25.0 are indicative of macroalbuminuria
and/or probably overt proteinuria

Table 3: Indicator for e-GFR and Urine Microalbumin