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Background:

Randomised control trials, have demonstrated the benefit of at home Topical Wound Oxygen (TWO2) therapy as an adjunct to Standard of Care (SoC) for diabetic foot ulcers (DFU).

Renal patients on dialysis have some of the most challenging DFUs, but they were excluded from original RCT.

Aim: To evaluate the possibility of delivering TWO2 therapy for patients with DFUs on haemodialysis as a proof of concept.

Method:

This was a retrospective review of a cohort of consecutive DFU patients who were initiated on TWO2 therapy while on haemodialysis attending King’s College Hospital with a range of non-healing DFUs despite having a good SoC.

Patients were initiated on the TWO2 while on dialysis 2 – 3 times a week. Clinical notes were reviewed retrospectively for patients baseline demographics and wound progress, between March 2025 and March 2026.



Patient Demographics		
Number	Patients	7 (9 DFUs)
Age (years)	Mean	62±14
	Range	36 – 80
Sex	Female	57%
Diabetes	Type 2	71%
HbA1c	Mean (mmol/mol)	60±23

Results:

There were nine wounds assessed in 7 patients. All ulcers were severe as per SINBAD classification with a score ≥3.

Four participants received treatment twice a week, while the other 3 had treatment three times a week.

Four of the participants had all of their treatment concurrently while on the dialysis machine.

The remaining 3 who were not dialysing at the main hospital unit, were still keen to travel 2-3 times a week to the diabetic foot clinic to receive the TWO2 treatment on their non-dialysis days.

All ulcers improved upon initiation of the TWO2 therapy.

Sample Case 1

80yr old with bilateral heel ulcer
ESRF on HD x3/week
> 12month non-healing DFU
bilateral heel ulcers Rt > left
Had angioplasty to lower limb
Recurrent surgical /podiatry
debridement
TWO2 treatment started for right
heel with good healing by week 7



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Sample Case 2

74yr old with Rt 5th toe and ray
amputation
Persistent die back with
debridement
With TWO2 treatment had
decreased die back, less necrosis
post debridement
Better granulation tissue



Before



Before



Week 2



Week 4



Week 6



Week 8

Conclusion:

There is a cohort of frail but complex DFU patients on haemodialysis who could benefit from TWO2 treatment. If there is the scope to deliver TWO2 for DFU concurrently while on haemodialysis two to three times a week, it could deliver improvement in DFU healing.