

## Portable Hemodialysis Machine for Chronic Hemodialysis in Hospital—Advantages and Future Uses

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### Abstract

Nx stage one machine results can help to enhance the clinical efficiency and shortage concerning the use of home hemodialysis. Therefore, the study investigates effectiveness of Nx stage machine for intermittent conventional hemodialysis in hospital for inpatients and outpatients to replace conventional hemodialysis in stable chronic hemodialysis patients.

**Methods:** Prospective observatory study was conducted in Nephrology Division, King Fahd General Hospital from April 1 to June 1 2018. Patients with ESRD, who were dependent on dialysis and maintained on regular hemodialysis were recruited. Fifty-two sessions of hemodialysis were performed. The patients were given intermittent dialysis using Nx stage one machine. Pre and Post dialysis investigations and body weight were taken, and patients were observed for any complications during or post-dialysis.

**Findings:** The primary endpoint ultrafiltration with a goal to remove 1 - 4 kg was achieved without any technical difficulty. Secondary endpoint for potassium reduction levels was achieved with mean SD post-dialysis  $3.53 \pm 0.3$ , and the tertiary endpoint was achieved in a patient less than 50 kg weight with spKt/V above 1.2. It was difficult to achieve spKt/V in patients with weight more than 60 kg due to limitations in the duration of sessions or dialysate volume. Target spKt/V was achieved for patients with body weight less than 50 kg; however, it was not achieved among the patients with body weight more than 60 kg.

**Discussion:** Nx stage one machine can replace conventional intermittent dialysis in terms of ultrafiltration and Potassium correction; however, further investigation is needed for urea clearance.

**Note :** Areej Ibrahim Alhazmi; Portable Hemodialysis Machine for Chronic Hemodialysis in Hospital—Advantages and Future Uses; Nephrology and Urology 2021; March 22-23, 2021; Paris, France