Best Practice-1

1. **Title of Practice**
   - Economical and efficient state of art hemodialysis unit
2. **Objectives of the practice**
   - To provide Haemodialysis services for the patients of Chronic Kidney disease (ESRD) and Acute Kidney Injury (AKI) in subsidized rate so that many patients can afford this facility.
   - To provide free Haemodialysis services through government scheme like Mahatma Phule Jan Arogya Yojana so that poor patients can avail this facility.
3. **The Context (Challenging issues)**
   - As the procedure involves removal and reinfusion of the blood from extracorporeal circuit in body, strict aseptic environment is needed.
   - Haemodialysis requires large volume (250lit) of water from water plants which incorporate sand filter, carbon filter and RO membranes for one session.
   - Trained doctors with trained nursing staff and trained dialysis technicians are required to perform Haemodialysis which runs 24 hrs in shift duties.
   - Separate dialysis machines are required for HCV positive and negative patients.
   - Regular maintenance of water plants and Haemodialysis machines is carried out.

4 The Practice (Haemodialysis)

- Patients are admitted from Casualty and OPD and accessed, diagnosed and treated by Resident doctors and consultants.
- Patient and relatives are informed about treatment plans advisory actions, expenditure of treatment proper consent for Haemodialysis and Lab investigations are mandatory before procedure.
- For the procedure proper consent vascular access is obtained (Central Line to IJV or femoral). Patient is then shifted to Haemodialysis unit where the procedure is carried out.
- Resident doctor posted in dialysis unit again re-access the patient for vitals.
- The procedure is initiated by Haemodialysis technician under strict aseptic precautions. During dialysis procedure BP and Sugar monitoring is done regularly. After 4 hrs the haemodialysis procedure is terminated. Blood from dialyzer and tubing is returned to the patient. Patient is re-accessed by resident doctor at the end of the procedure.

- Dialyzer and tubing are placed in container and carried to washing area where it gets washed with RO water. Then dialyzers are filled with disinfectant and sterilants and stored in a container. The containers are separate for the separate patient for use in next session.
- After termination of dialysis, patient is shifted to the ward or ICU in case of indoor patient and for outdoor patient weight and BP measurement is taken before and after dialysis and are given next schedule date and time.

5 Evidence of Success:

- As per 3 yrs. data of our Haemodialysis unit, number of Haemodialysis is increased every year.
- Number of procedures like AV Fistula and permanent catheter are increased.
- More number of people accepting Haemodialysis.
- Haemodialysis related complications are reduced. ..

	2017 – 2018	2018 – 2019	2019 - 2020
Total no of HD machines	6	8	12
Total no of dialysis	2685	2997	3910
Total no of OPD pts for HD	25	30	37
Daily IPD/OPD pts for HD	10-14	11-16	16-22
Total no of AKI pts admitted	42	108	130
Total no dialysis required for AKI pts	128	162	210
Permanent catheterization	-	12	27
AVF surgery	22	24	30
Newly registered	08	10	17
Death	06	11	08

6 Problems Encountered and resources required:

- Inadequate staff to patient ratio hence Increase recruitment of more members of HD technicians and nursing staff is needed.
- Resident doctor working in ICU or Casualty has been given extra Haemodialysis unit duties. So separate appointment of duty doctor in Haemodialysis unit is needed.

- Cost of drug therapy apart from Haemodialysis is high. So many patients are not adherent to treatment protocol. Hence drugs should be available in subsidized rate.

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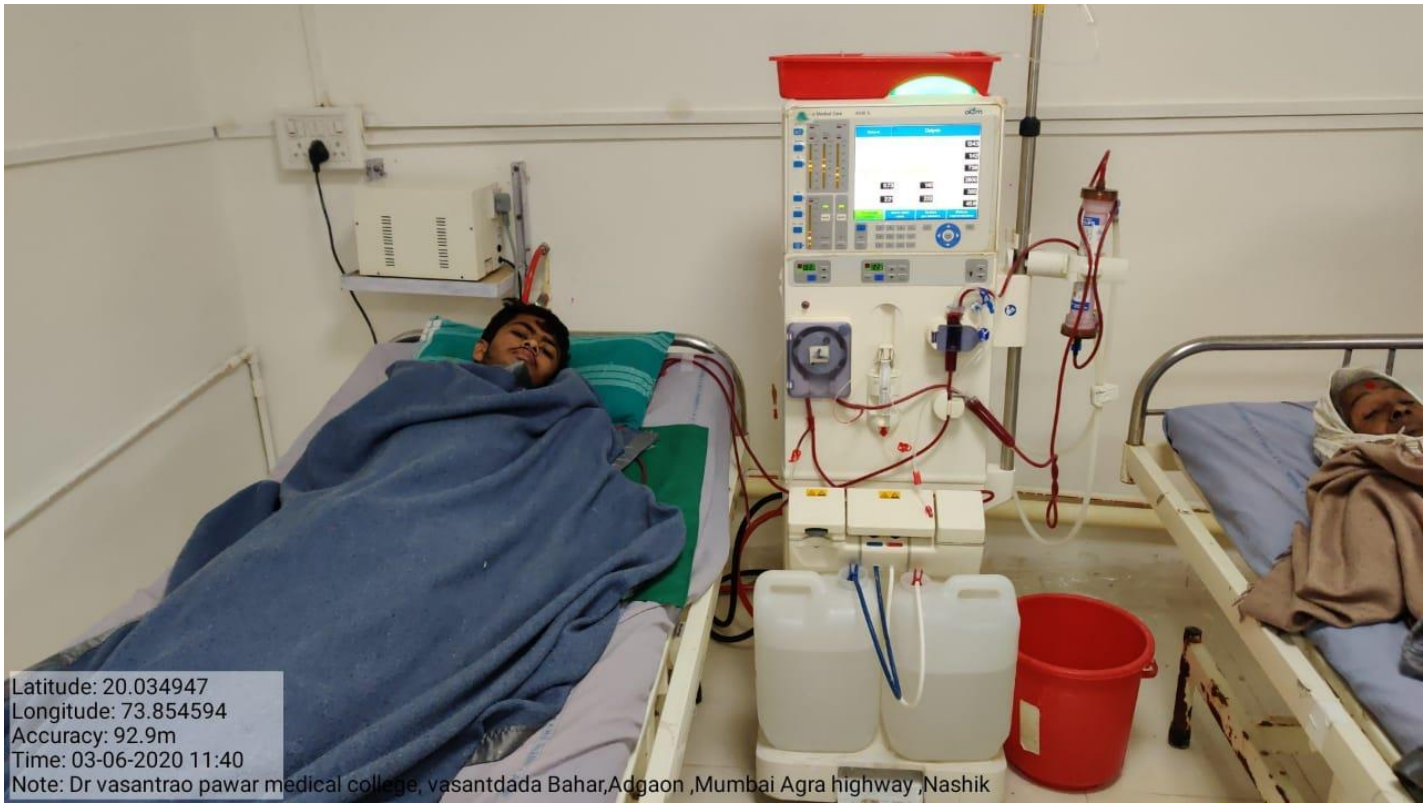

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