

# HOW TO OVERCOME BARRIERS AND START UP NEW PERITONEAL DIALYSIS PROGRAMS – EXPERIENCE FROM NEPAL



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## INTRODUCTION AND AIMS

Peritoneal dialysis is not available in many developing countries due to lack of expertise or fluid supply. It is challenging to start up new peritoneal dialysis programs where never was one before. One needs to assess all aspects, identify barriers and work on them one by one. The aim of this presentation is to provide a model and guide for new starters.

## METHODS

While preparing to start a new peritoneal dialysis program in Nepal, we have evaluated all aspects of potential barriers. First the institutional and health care system barriers were addressed by training sufficient number of staff and facilitating government support for financing peritoneal dialysis fluid. Second, we had to work on the patient's side. Individual assessments were done by the nephrologist and the nursing staff on their barriers. Solutions were worked out as a team.



Nurse training on peritoneal dialysis



The first patient undergoing CAPD exchange

## RESULTS

A successful peritoneal dialysis program has been started in the Western Region of Nepal in 2014. In the first one year 29 patients initiated peritoneal dialysis. Double-cuff Tenckhoff catheter was inserted by nephrologist via the percutaneous method in all patients. Twelve nurses were trained and became experienced in peritoneal dialysis during this period. All patients were able to avail government support for funding.

The individual barriers were as follows: 41.3% had initial lack of confidence in the modality, 51.7% required assistance due to age, frailty or other comorbidities, 31% had low socio-economic status with poor living conditions (mud house, lack of running water in homes), and 34.5% was living far from the center at not easily reachable geographical locations (Himalayas).

Confidence in modality was achieved by giving time on discussing all fears and myths and clarifying truth and reality regarding renal replacement options. Patients, who already started peritoneal dialysis were also involved in this aspect. For patients who required assistance, family members were identified to become carers. In mud houses a plastic PVC carpet was placed in the room where peritoneal dialysis would be performed and that is the only modification that was necessary in these homes. For distant locations transportation of the fluid was arranged by 4-wheel drive cars where motorway was available and by horses to the places without motorway.

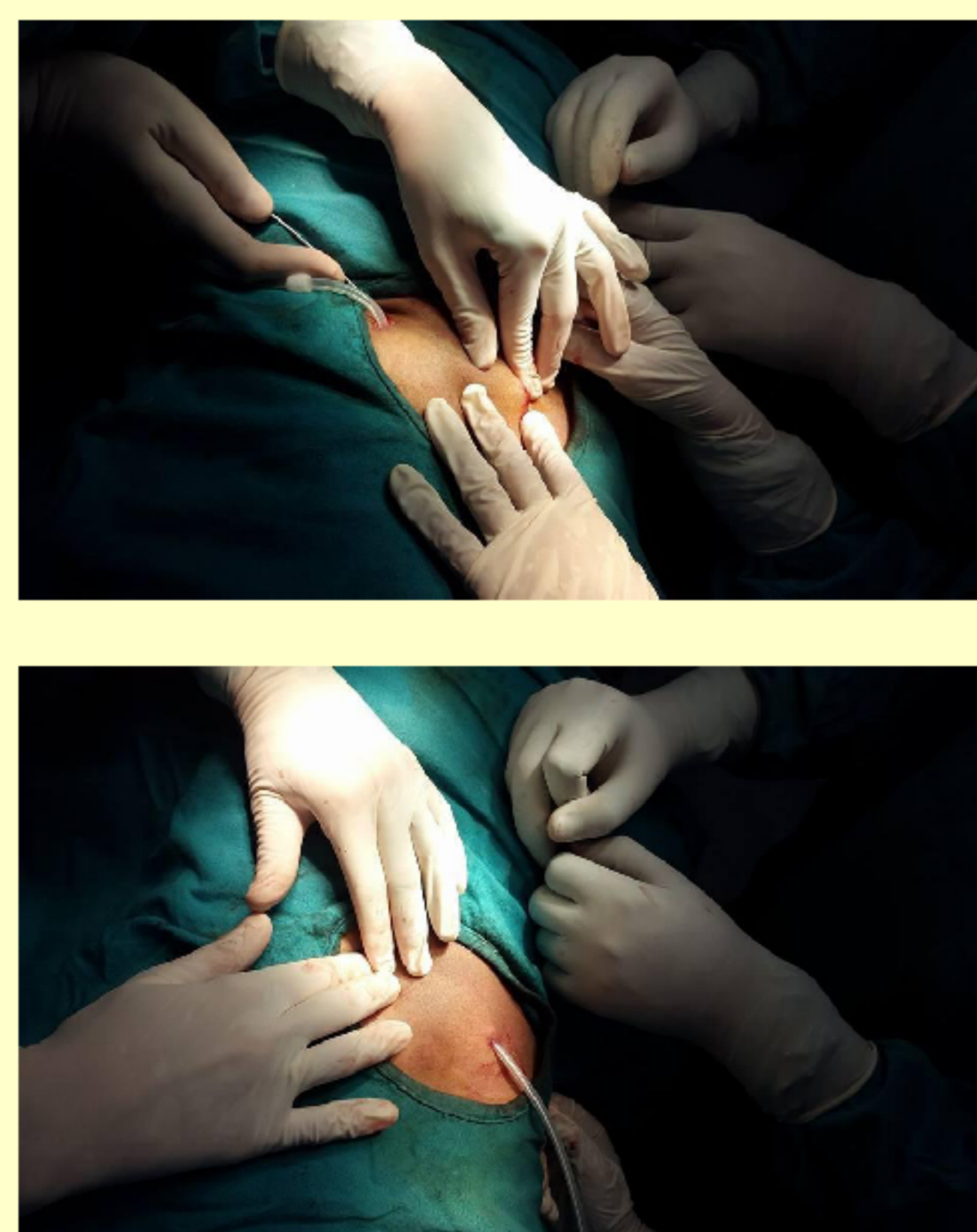
One year after the start of the peritoneal dialysis program 26 patients were still continuing this modality (10% drop out rate). Catheter complications were minimal and easily managed. Peritonitis rate was 1 : 18 patient-months, while exit site infection was zero.

## CONCLUSIONS

Peritoneal dialysis is a viable option for renal replacement therapy in the developing world. It is possible to overcome barriers by addressing them individually. Good results can be achieved even in newly started peritoneal dialysis centers.

## REFERENCES

1. Sharma SK, Manandhar D et al. Acute peritoneal dialysis in Eastern Nepal. *Perit Dial Int* 2003 Dec (23) Suppl.2:S196-9.
2. Sharma SK, Pahari B et al. Initiation of Continuous Ambulatory Peritoneal Dialysis in Nepal: Opportunities and Challenges. *Ind J Perit Dial*
3. Abraham G et al. A review of acute and chronic peritoneal dialysis in developing countries. *Clin Kidney J* (2015) 0:1-8.



Percutaneous insertion of Tenckhoff catheter in the operation theater

