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Challenges and Future Opportunities of PD in Asia

LILY MUSHAHAR

Hospital Tuanku Ja'afar Seremban, Malaysia

Peritoneal Dialysis (PD) is a well-established mature treatment modality for advanced chronic kidney disease and has equivalent short-to-medium term survival compared to hemodialysis (HD).

Asia has much diverse in ethnicity group, culture, environment, economics and government system. This contributes to diverse disease distribution, choice of renal replacement therapies, reimbursement systems and health related outcomes. Although the cost of PD is significantly lower compared to HD in majority of countries in Asia, there are different PD penetrations amongst these countries. PD uptake is very low in LMIC countries (Myanmar, Cambodia, Pakistan, Sri Lanka, Nepal) but high in HIC and HMIC countries that practices PD first policy (Hong Kong-70%, Thailand-30%). Meanwhile, in HMIC countries (Malaysia, China, Korea, Taiwan and India), PD penetration are less than 15 %.

There is also variation in PD practices (PD prescriptions, exit site care, PD related infections management) between PD centers in Asia. For PD quality of care, there are lack of comprehensive renal registries and publications in Asian countries limits the estimation of PD related outcome.

The challenges and barriers to PD in Asia includes:

1. Health system policy and dialysis provisions

It has been shown that globally about 64% of barriers to ESKD care are related to economics and resource limitations. This factor contributes to 86% in South East Asia and 43% in North & East Asia.

Placement of local government policies, incentives and reimbursement systems produces a significant impact on the success of PD modality. Hong Kong and Thailand which implement PD first policy has shown increase in PD uptake of 70% and 30% respectively with acceptable patient and technique survival.

2. Environmental factors

Geographical and rural environment contribute to more than 55% of barriers to ESKD care in Asia. PD offers an attractive choice or are the only choice for ESKD patients living in rural area. Greater distance to dialysis facilities and not keen for relocation of individual living in rural areas poses poor time of dialysis delivery and good quality of care.

Delay in diagnosis of PD related infections, lack of laboratory support for PD fluid sampling and delay in initiation of antibiotics are risk factors for poor PD patient and technique survival.

3. Patient factors

More people are living longer due to successful advances in health, nutrition, economics and social well-being.

PD are more suitable in elderly population as it is a home based dialysis, prolongation of residual

renal function, better cardiovascular stability, simple placement in PD access and potential lower mortality risk than HD. However, elderly may require assistance to perform PD due to cognitive and physical barriers.

As traditional Asians culture places heavy emphasis on filial piety, assisted PD are done by family members without any cost incurred. This is different from European countries that provides professional assistance healthcare worker which poses high cost covered by government funding. However, the changing value of family support in Asia with low fertility rate and children not staying with their parents poses a risk for financial shortcomings in terms to get paid assistance in future.

4. PD access services

Success of a PD program starts with an efficient PD access services. Inexperience operator and low success rate of PD access will jeopardise the PD program. This includes the long waiting time for PD access placement that contributes to the individual to lose interest to proceed for PD.

Future opportunities for PD in Asia are to implement changes in the system such as:

- Government policies regarding modality selection
- Reimbursement or funding strategies that incentivize one modality over another, or disincentivize use of a modality
- Provider capabilities and training - PD catheter insertions and PD procedures
- Clinical culture among healthcare professionals based on “usual practice” or experience
- Presence and extent of shared decision-making
- Support more automated PD (especially in assisted PD to reduce burnt out and better quality of life) and biocompatible PD fluids to preserve peritoneal membrane
- Remote Treatment Monitoring (RTM) and telehealth