

## **Information On Automated Peritoneal Dialysis (APD)**

### **Introduction**

Peritoneal dialysis is the most widely used treatment for end stage renal failure (ESRF) patients in Hong Kong.

### **The Procedure**

Dialysate fluid is instilled into the patient's abdomen via a catheter and the effluent is drained out at regular intervals, clearing the metabolic wastes and excessive body fluid from blood. For automated peritoneal dialysis, dialysate replacement (3-4 bags daily) or (10-12L daily) is done by a programmed machine. The most common types of automated peritoneal dialysis are continuous dialysis by cyclor and nocturnal peritoneal dialysis. The choice of treatment modality shall be determined by the nephrologist, as he/she sees fit.

### **Risk and Complication**

1. Peritonitis
2. Inflammation and bleeding at the exit site
3. Inflammation along the catheter beneath the skin
4. Catheter blockage or migration
5. Pain (in the pelvic cavity, or the so-called 'sucking pain" caused by suction force during drainage of peritoneal fluid)
6. Hyperglycemia
7. Fluid and electrolyte imbalance (such as dehydration or oedema)
8. Cramps
9. Protein loss
10. Increase in blood-lipid and triglyceride levels
11. Weight gain
12. Abdominal hernia
13. Scrotal or vulval edema
14. Shortness of breath and respiratory distress due to pleural effusion or abdominal distention.
15. Stomach acid regurgitation
16. Sleep disturbance by noise of machine

### **Before the Procedure**

Before being accepted into the APD programme, patients must agree on the followings:

1. Agree to receive APD treatment and follow instructions to perform dialysis.
2. If a patient is incompetent of self-care and cannot perform dialysis, a member from his/her family will be needed for assistance. This helper must understand the procedures and be ready to help voluntarily, whose assistance must not be stopped abruptly or taken over by another person.

3. Agree to undergo peritoneal dialysis catheter placement. If the catheter fails to function after surgery, re-operation may be needed.
4. Understand the complications of APD and to detect any abnormality.
5. Patient's responsibilities include:
  - (a) Perform dialysis according to schedule
  - (b) Take good care of catheter and catheter exit site
  - (c) Use medicines and dialysate correctly. Beware to use the appropriate temperature, concentration and volume of dialysate and follow designated procedures (antiseptic procedure/technique).
  - (d) Take the medicines according to schedule and follow the doctor's instructions on diet advice
  - (e) Keep treatment records and attend follow-up consultations as required.
6. Has to pay for dialysis related expenses
7. Follow instructions from the renal centre upon completion of training, the patient has to perform APD at home instead of long term PD in the renal centre
8. If patient shows signs of anaemia in the course of treatment, blood transfusions or other treatment may be needed.
9. Other examination, surgery or procedures may be needed in the course of treatment.
10. Take care of personal health. If there are contra-indications (e.g. mental disease, stroke, terminal cancer, incurable disease or incompetence of self-care), the authorities concerned may in accordance with medical principles cease dialysis or refer to renal palliative care service.
11. If patient or helper is unwilling to perform dialysis, they should inform the health care professionals accordingly.
12. Has to arrange appropriate regular maintenance and repair of the machine to ensure proper functioning and safety.

### **During the Treatment**

After starting APD, patient/ relatives should inform the renal centre staff of the following:

1. Leakage or breakage of catheter etc.
2. Ailments such as cramps, severe abdominal pain, nausea, vomiting, diarrhoea, rising body temperature, abnormal blood pressure (too high or too low), edema, shortness of breath, dizziness, general weakness
3. Dialysate is cloudy , turbid or decreased flow
4. Gradual increase in body weight with swelling or bulging of abdomen; main wound; catheter exit site; umbilicus; pelvic region; groin area; scrotum or vulva; and/or associated with pain
5. Problems during dialysis:
  - (a) imbalance of dialysate/effluent
  - (b) prolonged completion of process
  - (c) catheter or transfer set contamination
6. Inflammation at the exit site, such as redness, swelling and purulent discharge

## 7. Abnormality of dialysate effluent is noted

### **Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information please contact your doctor or the respective renal centre.