Peritoneal Dialysis Peritonitis and PD Catheter Exit Site Infection – Summary Clinical Guideline

Reference No: CG-REN/2021/003

This guideline is to be used by the renal team only, ALL individuals presenting outside the renal department who you suspect have Peritoneal Dialysis Peritonitis should be discussed with the Renal or medical Registrar on call immediately.The decision to refer PD patients suspected of peritonitis to surgical team should ONLY be made by the renal team.

Diagnosis(Need 2 out of 3 following criterion)

Criterion 1.Clinical features consistent with peritonitis, i.e. abdominal pain and/or cloudy dialysis effluent.
Criterion 2.Dialysis effluent white cell count > 100 (after a dwell time of at least 2 hours), with > 50% polymorphonuclear.
Criterion 3. Positive dialysis effluent culture.

Initial Treatment:	Record Observations, pulse, BP, temp, and inform medics. **If dwell present in the peritoneum & drainage is cloudy:** Send the fluid for urgent microscopy (WCC and Gram stain) and culture. (2 blood culture bottles and plain MSU pot).Carry out 2-3 rapid exchanges with 1 litre exchanges. • Take full set bloods incl. FBC, U&E, LFT, CRP, Blood cultures • Start IP antibiotics and consider analgesia • Document presence or absence of abdominal tenderness in vital data. • Document state of exit site and tunnel **If no dwell at presentation and minimal clinical evidence for peritonitis or dwell present for greater than 12 hours:** Put in a litre dwell(drain out the existing dwell if present and send for culture sensitivity) , leave the dwell for 2 hrs before sending the fluid for urgent microscopy (WCC and Gram stain) and culture.(2 blood culture bottles and plain MSU pot).After this do 2-3 rapid exchanges with 1 litre dwells If clinically indicated
Initial Antibiotics	**Day 1 – start antibiotics without waiting for white cell count IP vancomycin 2g and IP gentamicin 0.6mg/kg** in a 6-hour intraperitoneal (IP) dwell. (Reduce vancomycin dose to 1.5g if patient weighs <45kg).
In-patient management Daily **IP gentamicin**. (to continue once daily if	**Outpatient management** Prescribe **ciprofloxacin 500mg BD (Oral)** for 7 days pending culture results. (Reduce ciprofloxacin dose to 250 mg BD if

gentamicin levels less than 2).Check vancomycin level at day 3 if urine output is > 500 mls Daily PD WCC and cultures. **If no improvement in cell count by day 5**: Catheter should be removed. For patients with antibiotic allergies, follow detailed guideline.	Renal Kt/v is less than 0.8) **Day 3 -** visit the patient: Is there clinical improvement? **If no improvement:** • Arrange admission, consider vancomycin level check if Urine output >500ml & • Repeat PD WCC and culture. • Check growth and sensitivities**.** **If improving:** • Look at growth and sensitivities and tailor antibiotics accordingly (Follow detailed guideline) • Repeat PD fluid WCC and culture **Day 5 -** See the patient • Record full set of observations • Check abdomen for tenderness, exit site and tunnel • Check growths and sensitivities • Repeat WCC in PD fluid • Check vancomycin levels – Aim for 15-20, repeat bloods FBC,CRP Adjust frequency of vancomycin administration dependent on levels. See detailed guidance **If fluid not clearing inform registrar and PD consultant before the patient leaves the department – consider tube removal** **Days 5-21** Manage as per the organism isolated, Follow detailed guideline

Complete peritonitis record on vital data in full.
During In-hour encounter with PD Peritonitis, contact PD team on **Ext: 89355**
During OOH encounter with PD Peritonitis, alert PD Team via e-mail address: **dhft.CAPD@nhs.net**
For detailed guidance regarding organism specific antibiotics choice and duration please refer to the complete guidance.

Treatment of exit site and tunnel infections

- **Flucloxacillin 500mg QDs** for a minimum of **2 weeks** (continue until resolution)
- **OR** in pseudomonas aeruginosa infections **ciprofloxacin 500mg BD** for minimum of **2 weeks** (continue until resolution)
- (**Reduce ciprofloxacin dose to 250 mg BD if Renal Kt/v is less than 0.8** (Check PD review in Vital data for recent Kt/v values)
    - **If exit site infection still persists after 4 weeks of antibiotic treatment ,PD catheter should be changed with new exit site**

Disconnection or contamination of PD catheter/ extension line

- Give a single dose of **Vancomycin 2g IP** and **Gentamicin 0.6mg/kg IP** in a 6-hour intraperitoneal (IP) dwell. (Reduce Vancomycin dose to 1.5g if patient weighs <45kg).