

Kidney Health Information

Peritonitis

The peritoneum is the inside lining of the abdomen, and the outer cover of the internal abdominal organs. In peritonitis this becomes inflamed.

Although peritonitis can have other causes (as a complication of appendicitis for example), this information is about peritonitis in patients who are treated by peritoneal dialysis.

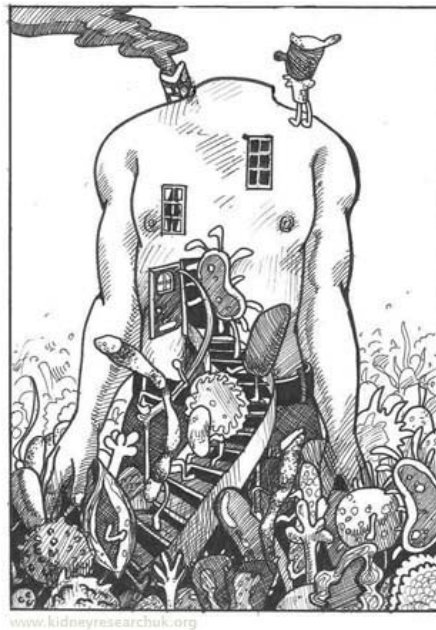
- peritonitis is usually caused by a bacterial infection entering the abdomen from outside the body: it is one of the complications of CAPD and the most common cause of ill health in this group of patients
- for a good illustration of how peritoneal dialysis works, visit this site:
<http://www.kidneypatientguide.org.uk/site/pdanim.php>

What goes wrong in Peritonitis?

The peritoneum becomes infected, usually because:

- bacteria have entered the body through the dialysis catheter

- if the open ends of the catheter are touched during a bag change, the infection is able to enter
- infections happen occasionally, even if every care is taken over hygiene
- exit site infections increase the risk of peritonitis
- occasionally the bowel can be the cause of peritonitis e.g. from diverticulitis



Peritonitis is usually caused by bacteria entering from outside the body

There may be one or more of the following symptoms:

- abdominal pain
- raised temperature or fever
- cloudy fluid from the dialysis.

Repeated bouts of infection can damage the peritoneal membrane and cause thickening or sclerosis.

Occasionally sclerosis can be the result of a reaction of the peritoneal membrane to a type of dialysis fluid or certain antiseptics or drugs.

Because of the thickening of the peritoneum, eventually the dialysis is no longer effective enough to continue CAPD.

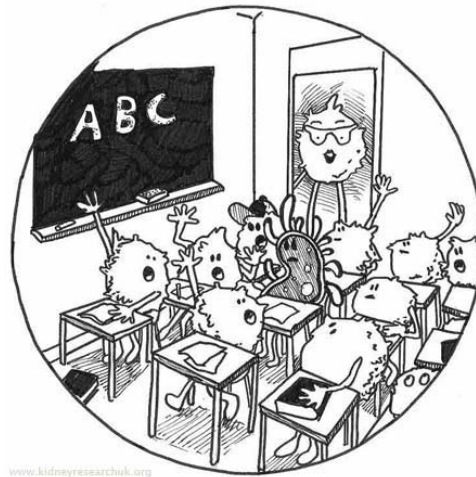
For this reason, some people have to transfer to haemodialysis.

Fortunately peritonitis does not happen frequently – the average is less than one infection a year for each peritoneal dialysis patient.

Diagnosis

- the dialysis fluid is usually clear – but becomes cloudy if peritonitis is present
- abdominal pain and fever may also be present
- a small sample of the ‘used’ dialysis fluid is examined microscopically for the amount of any white cells present. High numbers of these would indicate an infection
- the dialysis fluid may be ‘cultured’ to see which organisms (bugs) are causing the infection
- sensitivity tests on the organisms will determine which antibiotic treatments are best

- infections may be caused by Staph. aureus or yeasts or fungi are particularly difficult to cure.



A high count of white blood cells could indicate an infection

Treatments

- antibiotic treatment is started quickly as some of the tests above can take a few days to complete
- once the results are known, the antibiotic treatment can be adjusted
- antibiotics can be added directly to new dialysis fluid, as well as being by injection or taken as tablets
- some people are able to do this treatment themselves at home; others can be treated at the out-patients department
- if someone has severe or repeated peritonitis, it may be necessary to remove the dialysis catheter and 'rest' the abdomen for several weeks

- during this time haemodialysis is needed before the patient is ready to return to peritoneal dialysis
- for a few, haemodialysis becomes the long term treatment option.

Prevention

- keeping strictly to the CAPD training given by the specialist nurse, by following the exchange procedure and exit site care as it was taught will help prevent peritonitis
- good personal hygiene is a must before, during and after bag changes
- constipation should be avoided as it can cause problems with the flow of dialysis fluid out of the body. The best prevention of constipation is by having enough fibre in the diet. Regular exercise will also help.

Finding out more:

For information on peritonitis from the National Kidney Federation please follow this link: <http://www.kidney.org.uk/Medical-Info/pd.html>

For information on peritonitis from the EdREN please follow this link: <http://renux.dmed.ed.ac.uk/EdREN/EdRenINFObits/PDShort.htm>

Below is some information on our recent projects into peritonitis:

2005. Dr Ceri Fielding. Understanding factors in the failure of peritoneal dialysis. This study examines the relationship between the causes of peritoneal inflammation, the thickening of the membrane and the failure of peritoneal dialysis.

2005. Dr Ravinda Rajakariar. The role of prostaglandins in the healing of peritonitis in patients who are on peritoneal dialysis. One of the prostaglandins is thought to play a role in 'switching off' inflammation – the study examines this mechanism.

Kidney Research UK, together with the British Renal Society, The Renal Association and Baxter Healthcare Limited are supporting a three year study on improving the option of peritoneal dialysis for older people. This study will of course be considering problems such as Peritonitis.

Kidney Research UK has also funded several studies that look at the causes of peritonitis and its prevention.

Please be aware that we have made every effort to ensure this information is accurate, however we cannot guarantee that there are no mistakes. Also, the best management plans for individual patients may vary from those outlined here. Only the doctors caring for the patient will be able to advise on this. Please consult your own doctor.

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