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Complications Related to Hemodialysis

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Abstract:

People with chronic renal disease won't be able to filter their blood there for they'll need to undergo a procedure called hemodialysis.

In hemodialysis, a dialysis machine, a special filter called an artificial kidney, or a dialyzer, are used to clean your blood. As much as it helps the human body to filter out all the chemicals and unwanted substance, the patients undergoing this procedure may face other complications discussed in this report.

Introduction:

Healthy kidneys clean your blood and remove extra fluid in the form of urine. They also make substances that keep your body healthy. Dialysis replaces some of these functions when your kidneys no longer work. There are two different types of dialysis, hemodialysis and peritoneal dialysis. But here we'll talk about hemodialysis.

Hemodialysis is an artificial kidney used to remove waste and extra chemicals and fluid from your blood. To get your blood into the artificial kidney, the doctor needs to make an access into your blood vessels. This is done by minor surgery to your arm or leg. Hemodialysis has many side effects either effecting the urinary system or other systems.

Discussion:

Hemodialysis is a procedure where an artificial device is taking the kidneys job with blood filtration and taking of all the body wastes. The procedure starts where a needle penetrates the fistula. This procedure has many complications starting with patients discomfort. There may be some discomfort when the needles are put into your fistula or graft, but most patients have no other problems. The dialysis treatment itself is painless. However, some patients may have a drop in their blood pressure. If this happens, you may feel sick to your stomach, vomit, have a headache or cramps. With frequent treatments, those problems usually go away.

It has many other complications as Vascular access related (infection, bleeding), Often caused by Staphylococcus aureus it can present with signs of localized infection or systemic sepsis. Some other findings might be found as thrombus or stenosis which often presents with loss of bruit or thrill over access site

Nonvascular access related (hypotension, hyperkalemia). Mostly hypotension After dialysis, Often owing to acute decrease in circulating blood volume, After dialysis. often owing to acute decrease in circulating blood volume. Also MI, sepsis, dysrhythmia, hypoxia or shortness of breath due to volume overload.

Development of dyspnea during dialysis owing to tamponade, pericardial effusion, hemorrhage, anaphylaxis, pulmonary embolism and air embolism

Peritoneal (abdominal pain, infection), Peritonitis Owing to contamination of peritoneal dialysate or tubing during exchange. *S. aureus* or Staphylococcus epidermidis account for 70% of cases. Along with other renal problems as polycystic kidney disease PKD.

Other studies show that hemodialysis leads to many other countless complications as muscle cramps, but the cause is still not clear muscle cramps during hemodialysis are common. Sometimes the cramps can be eased by adjusting the hemodialysis prescription. Adjusting fluid and sodium intake between hemodialysis treatments also may help prevent symptoms during treatments.

Itching could be another cause at the site of needle puncture causing discomfort during hemodialysis, and some patients have complained that it gets worse after the procedure.

Sleep apnea is a very common complication due to breaks of breathing.

Fluid over load, hyperkalemia, hypertension if the patient consumes more than his or her own needs of fluid and salts.

Access site complications have been reported as infections that may lead to sepsis and pericarditis, aneurysms or narrowing to the blood vessels.

Depression and mood swings may be another complication due to all the stress that patients experience along with time.

Conclusion:

Hemodialysis, the device used for blood filtration in cases of renal failure, as much as it helps with getting rid of toxic and unwanted substances the device has many complications rather they're systemic as infections, sepsis, thrombus, hypotension and others, or others problems associated to the kidney as polycystic kidney disease (PKD), or psychologic problems.

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