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Commentary

Hemodialysis Methodology, Impacts, Potentials and Drawbacks

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DESCRIPTION

The most well-known role of healthy kidneys in the body is to produce urine, while they serve a number of other purposes as well. When kidney function falls to 10% to 15%, the kidneys can no longer filter blood and produce urine. As a result, toxins and extra fluid accumulate in the body. The good news is that today's treatments and medications can take the place of the kidneys' activities and keep the body alive. Hemodialysis is a sort of renal replacement therapy, or a treatment that substitutes kidney function. Hemodialysis is a treatment that filters waste, eliminates surplus fluid, and restores electrolyte balance.

Hemodialysis involves withdrawing blood from the body, filtering it *via* a dialyzer, or artificial kidney, and then reinserting the filtered blood back into the body. Only one pint of the average person's blood—which ranges between 10 and 12 pints—is taken out of the body at a time during dialysis. An access must be made in order to transport blood from the body to the dialyzer and back again during hemodialysis. Arteriovenous (AV) fistula, AV graft, and central venous catheter are the three different forms of hemodialysis access. The vascular access that is most frequently advised by the dialysis community is the AV fistula, but the doctor and we will decide which access is appropriate.

When a patient undergoes hemodialysis, a nurse or technician will take their vital signs and weigh them. The patient's weight increase will indicate how much extra fluid needs to be drained during the course of treatment. Once "placed on the machine," the patient. A patient having a vascular access will have two needle sticks in their access; one needle will draw blood from the body and the other will return it. The two tubes from the patient's access will be connected to the blood tubes going to the dialyzer and coming back to the body for patients with central venous catheters. After the patient has been "placed on the machine," the dialysis machine is set up, and then the procedure starts.

The dialysis machine never truly processes blood. A large computer and a pump make up the dialysis machine. It monitors key statistics like blood pressure, blood flow, how much fluid is evacuated, and more. The fluid bath that goes into the dialyzer is called the dialysate, or dialysis solution, and it is mixed. The bath is flushed down the drain after this fluid assists in removing toxins from the blood. The blood tubes that take blood from the body to the dialyzer and back to the body are pumped by the blood pump in the dialysis machine to maintain blood flow. Additionally, the dialysis device offers a lot of safety detection functions.

Hemodialysis benefits and drawbacks

Especially people with end-stage renal failure, hemodialysis are a successful treatment. Hemodialysis is not a full treatment for kidney failure, though. Dietary and fluid limits must be adhered to, and medications may be required to replace other kidney functions like controlling blood pressure and promoting the creation of red blood cells to prevent anemia.

One advantage of choosing in-center hemodialysis is that patients will receive their treatments from skilled medical experts in a dialysis facility. They can pass their time in dialysis by resting, reading, and writing, watching television, listening to music, or engaging in other calm hobbies.

They will be exempt from having to go to dialysis on four days per week. The fact that they will need to travel to and from hemodialysis three times per week as well as the need to make advance arrangements to travel and get dialysis at a visiting dialysis facility are a few drawbacks. Limiting salt, potassium, and phosphorus-containing foods and drinking just a certain amount of fluid are among the dietary limitations. Following hemodialysis, some patients claim to feel "washed out" and return home to sleep. The feeling of being washed out is not as typical for those who undergo night-time hemodialysis, according to their reports.

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