



Modified Albumin Dialysis

Treating the signs and symptoms of liver failure

This handout describes **modified albumin dialysis**, a procedure to treat the symptoms of liver failure. It provides written information about this procedure, including risks, benefits, and other options.

This material is in addition to the talks you have with your doctors. It is important that you fully understand this information. Please read this handout thoroughly and talk with your doctors about any questions you have before you sign the consent form.

About Liver Failure

When the liver fails, the kidneys often fail, too. Because of this, *toxins* (poisons) build up in the blood of people who have advanced end-stage liver failure. These toxins cause serious illness. Two signs of advanced liver failure are confusion and extreme sleepiness.

Most people with advanced liver failure do not survive. The only hope is for the liver to heal itself or to get a liver transplant. Even after liver transplant, the risk of death can be very high if the new liver does not work and cannot be replaced with another one.

What is modified albumin dialysis?

Dialysis is a way to remove the toxins that build up in your blood from kidney failure. Dialysis cleans your blood by passing it through a filter. This filter removes the toxins by passing them into a dialysis fluid. The healthy parts of your blood are returned to your body.

Dialysis is also used to remove the toxins that build up from liver failure. But, it is usually less effective at removing these liver toxins.

A few recent studies have shown that patients' health improved when *albumin* was added to the fluid that is used in dialysis. Albumin is a protein that is made by the liver. Modified albumin dialysis uses a charcoal column (filter) to remove the toxins from the albumin dialysis fluid. This process may improve the removal of the liver toxins.

How is the procedure done?

The procedure is a standard routine dialysis procedure, except that albumin is added to the dialysis fluid. This fluid is then passed through a charcoal column.

Charcoal columns are often used to trap toxins that are being removed from blood. The charcoal will remove toxins from the dialysis fluid that contains albumin. This allows the fluid to be used continuously for several hours. Using it for this length of time can make it remove toxins more effectively. Blood that is "cleaned" in this way then goes through the normal kidney dialysis method before being returned to the body.

Questions?

Your questions are important. Call your doctor or health care provider if you have questions or concerns. UWMC clinic staff are also available to help.

Call 206-598-6190 and ask for the Attending Renal Doctor on call to be paged.

What are the benefits of this procedure?

This modified albumin dialysis procedure may remove more toxins from the failing liver and kidney than standard dialysis procedures. It may make the dialysis more effective and improve body functions, including brain function.

What are the possible risks and complications from this procedure?

This change in dialysis procedure (adding albumin and charcoal columns) is a fairly new procedure. The potential risks are similar to the risks of standard dialysis or standard charcoal treatments. These risks include:

- Air bubbles in the blood that may travel to your heart, lung, or brain, and cause serious complications
- Bleeding
- Blood clots
- Loss of blood if the dialysis system gets clogged
- Infection

Other risks are the same as for any routine dialysis treatment. We do not know if using albumin or charcoal columns will increase or decrease these risks. As with any new treatment, there also may be unknown risks.

Known risks of routine dialysis include:

- A drop in blood pressure
- Nausea and vomiting
- Headaches
- Flushing of the face
- Muscle cramps
- Irregular heartbeat
- Brain swelling
- Heart attack
- Stroke
- Coma
- Death

Are there other options?

You may decide not to have modified albumin dialysis. If you decide not to, there will be no effect on any of your care. You will continue to receive our standard dialysis care as usual.

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