Acute renal failure

Acute renal failure (ARF), is a rapid loss of kidney function. Its causes are numerous and include low blood volume from any cause, exposure to substances harmful to the kidney, and obstruction of the urinary tract.

Symptoms

- Accumulation of urea and other nitrogen-containing substances in the bloodstream lead to a number of symptoms, such as fatigue, loss of appetite, headache, nausea and vomiting.
- Increases in the potassium level can lead to irregularities in the heartbeat can be life threatening.
- Inability to excrete sufficient fluid from the body can cause accumulation of fluid in the limbs
- (Peripheral Edema) and the lungs (pulmonary edema)
- Pain and Thirst

Classified into 3 general categories, as follows:

- Prerenal - as an adaptive response to severe volume depletion and hypotension, with structurally intact nephrons.
- Intrinsic - in response to cytotoxic, ischemic, or inflammatory insults to the kidney, with structural and functional damage.
- Postrenal - from obstruction to the passage of urine.

Diagnosis

- Decrease in urine output.
- Blood tests for substances normally eliminated by the kidney: urea and creatinine. Also sodium and potassium level.
- Urine sediment analysis, renal ultrasound and/or kidney biopsy.

Treatment

- Urinary catheter helps monitor urine output and relieves possible bladder outlet obstruction, such as with an enlarged prostate.
- Diuretics such as furosemide.
- Hemodialysis

Complications

Metabolic acidosis, hyperkalemia, and pulmonary edema (may require medical treatment with sodium bicarbonate, antihyperkalemic measures, and diuretics)

Prognosis

Depending on the cause, a proportion of patients will never regain full renal function, thus having end-stage renal failure requiring lifelong dialysis or a kidney transplant.

Links

Related Articles

Bibliography

References

KUMAR, – CLARK,. *Clinical Medicine.* 8. edition. 2012. ISBN 9780702044991.