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Perspective

Treatment of Nephritic Syndrome and its Signs and Symptoms

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DESCRIPTION

Nephritic syndrome is a collection of symptoms that indicate the presence of nephritis, an inflammatory kidney disease. Glomerulonephritis is the medical term for it when it affects the glomerulus. Small pores can be found in the podocytes of the glomerulus and glomerular basement membrane is inflamed and thinned during glomerulonephritis. These holes enlarge to the point where red blood cells and proteins can both enter the urine (yielding proteinuria and hematuria, respectively). Nephrotic syndrome, in contrast, is characterised by proteinuria and a variety of other symptoms, none of which particularly include hematuria. Because albumin moves from the circulation to the urine, nephrotic syndrome and nephritic syndrome may both have low levels of albumin in the blood [1].

Treatment

When nephritic syndrome is diagnosed in a patient, controlling high blood pressure and reducing active inflammation in the kidney itself are the main therapeutic objectives (independent of the underlying aetiology). The patient will typically need to be admitted to the hospital for close monitoring in order to ensure the effectiveness of the treatment and make any changes [2].

- Bed rest during the healing process to assure administration of effective medical therapy with the least amount of risk for any aggravating variables are some therapeutic techniques frequently utilised to achieve these goals (falls, infection, etc.).
- Fluid restriction to lessen the chance of edoema (if it isn't already present) or to lessen any possible active edoema [3].
- A particular diet throughout the hospital stay that limits fluids, salt, and potassium in addition to the already mentioned fluid restriction in an effort to manage fluid overload symptoms.
- Giving diuretics to a patient who exhibits symptoms of fluid excess. The extra fluids will be eliminated in the urine as a result, which may relieve the strain on the kidney and help it heal from the inflammatory damage.
- The administration of antihypertensives to treat hypertension and keep blood pressure within normal range while recovering [4].
- The use of anti-inflammatory drugs (such as steroids) to lessen renal inflammation that is currently occurring.
- The treatment team may decide to temporarily (or permanently, in certain severe situations) use kidney dialysis if the patient is displaying signs of renal failure or end-organ damage in order to reduce stress on the kidneys and promote a full recovery [5].

After the acute nephritic syndrome is under control, it is critical to identify and treat the underlying pathology that led to the development of the acute nephritic syndrome [6]. Nephritic syndrome or chronic kidney disease (CKD) are more likely to return in the future if the underlying cause is not identified and properly treated [7].

Signs and symptoms

Blood in the urine (hematuria), elevated blood pressure (hypertension), decreased urine production (oliguria) of less than 400 ml per day, red blood cell casts, pyuria, and mild to moderate proteinuria have historically been used to describe nephritic syndrome [8]. If the illness is allowed to worsen without receiving treatment, azotemia and uremic symptoms may eventually develop. The conventional nephrotic syndrome presentation, which includes severe proteinuria >3.5 g/day, low plasma albumin levels (hypoalbuminemia) 3 g/L, widespread edoema, and hyperlipidemia, contrasts with this constellation of symptoms [9].

Nephritic syndrome is characterized by the following symptoms and signs:

- Proteinuria ranges from sub-nephrotic (3.5 g/day) to >10 g/day, albeit it is rarely above nephrotic range proteinuria levels.
- Hematuria is the presence of red blood cells in the urine [10].
- Hypertension resting blood pressure is consistently 130/80 or 140/90 mmHg or higher.
- Distorted eyesight
- The Azotemia (increased plasma Urea and Creatinine)
- Oliguria (low urine output, less than 400 ml per day)
- Casts of red blood cells (seen with urinalysis and microscopy)
- Pyurus (white blood cells or pus in the urine)

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