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ISSN: 2572-9462
Journal of Thrombosis and Circulation: Open Access

Commentary

Treatment and Prevention of Renal Vein Thrombosis

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DESCRIPTION

Renal Vein Thrombosis (RVT) is the formation of intravenous blood clots that carry blood from the kidneys, eventually reducing the outflow from one or both kidneys and moving the blood clots to other parts of the body. The RVT was first described by the German pathologist Friedrich Daniel von Recklinghausen in 1861 and most commonly affects two subpopulations of neonates with hemorrhagic disease or dehydration and adults with nephrotic syndrome.

Nephrotic syndrome, a kidney disease, causes excessive loss of protein in the urine, low levels of albumin in the blood, high levels of cholesterol in the blood, and swelling, causing hypercoagulability and possible clot formation. Other less common causes include hypercoagulability, cancer, kidney transplantation, Bechet syndrome, antiphospholipid antibody syndrome, or blunt trauma to the back or abdomen.

Treatment of RVT focuses primarily on the prevention of blood clots in the kidney and the maintenance of stable renal function. The use of anticoagulants has become the standard care in managing this anomaly. Membrane glomerulonephritis, the most common cause of nephrotic syndrome in adults, peaks in people aged 40 to 60 years and is twice as common in men as in women. Because nephrotic syndrome is the most common cause of RVT, people over the age of 40 and men are at greatest risk of developing renal vein thrombosis. Renal vein thrombosis is an uncommon disorder. It may be caused by:

1. Abdominal aortic aneurysm
2. Hypercoagulable state: clotting disorders
3. Dehydration (mostly in infants)
4. Estrogen use
5. Nephrotic syndrome
6. Pregnancy
7. Scar formation with pressure on the renal vein
8. Trauma (to the back or abdomen)
9. Tumor

In adults, the most common cause is nephrotic syndrome. In babies, the most common cause is dehydration.

Symptoms can be difficult to distinguish from the symptoms of the underlying disorder. Nephrotic Syndrome or Malignant Kidney Disease:

- Acute- Low back pain decreased renal function, hematuria, renal hypertrophy, asymmetric lower limb edema, increased proteinuria in nephrotic syndrome.
- Chronic- It may have no symptoms or signs and is detected by decreased renal function, increased proteinuria, or an abdominal MRI scans.
- Other features of both acute and chronic forms are pulmonary embolism, increased peripheral edema, dilation of the abdominal veins, and left varicocele (with thrombosis of the left renal vein).

Renal vein thrombosis usually induces ischemic parenchymal damage to the kidney, causing acute renal failure. The long-term effects of renal vein thrombosis vary. Ultrasonography may make the kidneys less noticeable when the renal veins are reopened or the venous collaterals develop. However, if the kidneys are severely damaged, chronic changes such as decreased kidney size and increased echogenicity (secondary to fibrosis) are apparent. The most common ultrasound findings in acute renal vein occlusion are renal hypertrophy and parenchymal echogenic changes, both caused by parenchymal edema and, in some cases, bleeding.

The most common treatment is a drug that can dissolve or prevent the formation of blood clots. Anticoagulants are designed to help prevent blood clots and may be the most effective way to prevent the formatiion of new blood clots. Thrombolytic drugs can also be used to destroy existing blood clots. Some of these medicines are given through a catheter inserted into a vein in the kidney.

There is no specific preventive measure as this condition can be caused by a variety of medical conditions. One of the easiest things you can do is to rehydrate and drink water to reduce the risk of blood clots forming. Deviations from the prescribed plan may increase the risk of complication.

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Received: 13-Jun-2022, Manuscript No. JTCOA-22-17571; **Editor assigned:** 16-Jun-2022, PreQC No. JTCOA-22-17571 (PQ); **Reviewed:** 30-Jun-2022, QC No. JTCOA-22-17571; **Revised:** 07-Jul-2022, Manuscript No. JTCOA-22-17571 (R); **Published:** 14-Jul-2022, DOI: 10.35248/2572-9462.22.8.193.

Citation: Sheng L (2022) Treatment and Prevention of Renal Vein Thrombosis. J Thrombo Cir. 8:193.