

## **80% of critically ill newborns in India have Acute Renal Failure: Experts**

Upto 80% of critically ill newborns in India suffer from Acute Kidney Injury (AKI), also known as Acute Renal Failure, experts from Batra Hospital and Medical Research Centre said today.

As many as 30 to 50% of patients in the Intensive Care Unit and about 5% of hospitalised children overall have this condition.

Again, Chronic Kidney Disease (CKD) together with End Stage Renal Disease (ESRD) has a worldwide incidence of 350 per million population," Dr Sanjeev Bagai, CEO and Consultant Pediatrician and Nephrologist, Batra Hospital said on the eve of World Kidney Day.

Approximately 3,00,000 ESRD children exist in India with fewer than 5% receiving renal replacement therapy, he said.

"Kidneys are the corner stone of the body and it helps maintain metabolic balance, body fluids, salts and blood pressure. More often injury occurs at a sub-clinical level with no external manifestations or any changes in the blood profile, until it is too late," he said.

Thus, failure to recognise significant renal injury delays treatment and leads to a higher morbidity. This leads to CKD in later life begin in children, the doctor said.

AKI is commonly precipitated by those including conditions like Acute Gastroenteritis, blood loss, shock, inflammation of the Liver (known as Fulminant Hepatitis) and heart failure.

In this background, assessing kidney function precisely assumes particular significance.

Early detection of a functional abnormality leading to a prompt intervention can prevent significant kidney damage.

"Unfortunately, as of now we don't have many diagnostic methods or tests in place, which could help us detect these abnormalities early, especially before the disease has become clinically manifest," the Center said.

"Kidney function so far is gauged by creatinine and its small rise increases risk of mortality. Creatinine tends to be an unreliable indicator of AKI (variations with age, gender, muscle mass and metabolism, hydration status) and does not change until 50 per cent of kidney function is lost," Bagai said.

Asked whether there would be some early diagnostic tool available, Bagai said, "In the near future there would be novel biomarkers for early detection and management of kidney injury including Urine panel of NGAL, IL-18, KIM-1, and Plasma panel of NGAL and Cystatin C. These biomarkers are sensitive much before rise in Serum creatinine."

The symptoms and signs are often subtle and hidden. Laboratory investigations include detailed blood and urine analysis with radio imaging are must.

"Detailed history taking and clinical examination is the key to early diagnosis. The mortality in AKI remains high (10-19%) with a five-year survival of severe AKI at 80%," said Dr Ramesh Kumar, Senior Consultant Nephrologist, Batra Hospital, located in Delhi.