Robot Assisted Hip Replacement Surgery Helps Young Patient

Robot-assisted hip replacement surgery helps young patient

For 23-year-old Akash Kumar*, life was all about bouts of throbbing pain in his lower back and hips. What started as dull aching pain a few years ago was diagnosed as ankylosing spondylitis (AS) of the spine and hips that gradually progressed into an illness that restricted even simple movements like squatting and sitting cross-legged. His life came to a complete standstill.

AS, a form of arthritis, is an autoimmune disorder that is witnessing an increasing incidence in India. One in every 100 adults is affected by it. More prevalent in men, those in their late 20s and early 30s are typically the most affected. However, as they say, there's always light at the end of the tunnel. For Akash, it was robotic arm-assisted hip-replacement surgery. This technology has come as a boon during the pandemic by reducing hospital stay and ensuring faster recovery for patients.

Dr Ashish Singh, consultant orthopaedic and robotics joint replacement surgeon at Anup Institute of Orthopaedics and Rehabilitation, Patna, says, "His hip joint was fused and absolutely fixed. Due to limited joint movement, his muscles had shrunk and bones were brittle and weak too. Typically, our hip joint bears majority of our body load. But in Akash's case, with an altered body dynamic, his normal joints were being stressed as they were bearing the entire pressure of the body."

While there is no cure for AS, in the initial stages, occupational therapy, physical therapy, medications and exercise help manage the pain and stiffness, prevent deformity and preserve mobility. However, in severe cases, a total hip-replacement therapy is usually the only option left.

"Given his young age and complexity of the condition, our major concern was to accurately align the implant so that the need for revision surgery gets significantly reduced. Robotic arm-assisted technology helped us achieve that. After we performed his hip replacement surgery, he was able to sit properly on bed within two hours. He walked within six hours using support and climbed stairs in 24 hours," says Dr Singh.

In robotic arm-assisted surgery, the software develops a 3D model of the diseased joint using the patient's CT scans that helps surgeons create a personalised surgical plan even before entering the operation theatre. This helps in deciding the most accurate bone cuts and alignment of implants. The unique haptic technology ensures that surgeons remain within the virtual boundaries created, as the robotic arm cannot be physically moved outside the boundary.

Today, Akash is back home recovering and making plans for a better, brighter life ahead.

** Name changed*

The views expressed in the article are the sole responsibility of the doctor.