

AT APOLLO CBCC CANCER CARE, GNADHINAGAR

3-year-old Ahmedabad Girl Operated for World's largest Wilms Tumor

3.1kg tumor mass removed from kidney
One of the rare cases wherein the patient possessed horseshoe kidney

When parents of 3 year old ABC visited hospital for checkup they had no idea what they were about to discover. They had started noticing the protruding belly of their daughter and when it kept on increasing over a period of 2-3 weeks they decided to seek doctors. Upon investigation, Dr. Hemant Menghani concluded that the child **was suffering from Wilms Tumor**. Moreover, the child possessed Horseshoe Kidney (both side kidneys attached to each other at one end). The tumor was so huge occupying almost whole abdominal cavity pushing into the diaphragm thus causing the child severe breathing difficulty. The case was discussed in the multidisciplinary tumor board. Under normal circumstances for such huge mass generally biopsy followed by chemotherapy is the course of treatment. However, there were several risks with this approach. Owing to the deteriorating health of child and the race against time, the doctors at **Apollo CBCC Cancer Care** decided to take prompt action. The decision was to perform emergency surgery as it was the best chance to save the child.

The challenging surgery was performed by Dr. Nitin Singhal – Surgical oncologist and team (Dr. Ankit Chauhan – Anesthetist and Dr. Kirti Prajapati – Pediatric surgeon). The surgery was a herculean task which took almost four hours to accomplish it. There were several challenges during surgery :

- 1) To remove the mass intact without rupturing which would have upstaged the disease.
- 2) To ensure avoiding damage to adjacent important structures including major vessels and to avoid bleeding.
- 3) To save as much as kidney as possible as the child had horse kidney.
- 4) A four hour surgery for such a small child with a huge mass pressing on the major organs and major vessels along with pressure on both the lungs leading to breathing difficulty on lying down and sleepless nights can crash during induction of anesthesia, maintaining hemodynamic stability and monitoring temperature and controlling pain.

The tumor has been discovered to be the largest tumor resected in this age group in the world to the best of our knowledge (3.1 kg of size 26 x 27 x 8 cm). The child's weight was 14kg, hence tumor mass weight formed 22 percent of total body weight.

Wilms' tumor is a rare kidney cancer that primarily affects children. Also known as nephroblastoma, it's the most common cancer of the kidneys in children. Wilms' tumor most often affects children aged below 5 years.

While the incidence of horseshoe kidney is about 1 in 500 cases, the presence of Wilms' tumor with a horseshoe kidney is unusual. The occurrence of Wilms' tumor in a horseshoe kidney is estimated less than 1% of all Wilms' tumors.

This case highlights the lack of awareness in our society in relation to pediatric tumors which has good prognosis if treated properly and on time which is proven in the literature. In fact, such tumors in this age group have much better survival chances than adult tumors.



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