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*** Final Report ***

DATE OF PROCEDURE: 03/26/2015.

PRE-OPERATIVE DIAGNOSIS: 1. Diaphragmatic hernia. 2. Tension pneumothorax.

POST-OPERATIVE DIAGNOSIS: 1. Diaphragmatic hernia. 2. Tension pneumothorax.

PROCEDURES PERFORMED: 1. Placement of chest tube with thoracoscopy. 2. Repair of diaphragmatic hernia.

SURGEONS: Jennings, Russell W, MD.
Nijagal, Amar, MD.

ASSISTANTS:

ANESTHESIA: General by endotracheal tube.

AGE OF PATIENT: 9 years.

WEIGHT: 28 kilograms.

INDICATIONS FOR SURGERY: This young man is undergoing a laparoscopic pyeloplasty by Dr Cilento and his team. When they placed the robotic camera, they noticed there was a hole in the diaphragm, and at the same time, the anesthesiologists were complaining they had to go

up on the ventilatory pressures. I was then called for an intraoperative consultation. It looks like there is an old chest tube site from his previous cardiac surgery and pulmonary vein repair, and this has resulted in a small hole in the diaphragm which is about 8-10 mm and, unfortunately, causing a tension pneumothorax which is compromising his ventilation. We decided it would be best to repair it, since he needs to proceed with his pyeloplasty in order to save his kidney. I went out and talked to the family with Dr Cilento. They clearly understand the indications, the operation, the alternatives, and risks and requested we proceed.

DETAILS OF PROCEDURE AND FINDINGS: The patient underwent an uncomplicated thoracoscopic-guided placement of a chest tube. We did this so we were absolutely certain we did not cause any harm to the lungs or to the diaphragm, so it had to be placed very low. We then did a laparoscopic repair of the diaphragmatic hernia with
3-0 Ethibonds and hooked up the chest tube to 20 cm H2O suction for the case. We anticipate being able to take this chest tube out at the end of the case.

After induction of general anesthesia, we performed laparoscopy as I described above. We went out and talked to the family. We did the above moves and decided it was best to just get this repaired.

Time-out -- We then performed our time-out to meet World Health Organization Guidelines and very carefully followed the checklist on the wall of every operating room. All the members announced themselves by name and by their role.

Thoracoscopic chest tube placement -- We switched out the robotic camera for the 8 mm camera, which we felt would probably fit through this hole. The 12 mm, large camera did not fit through the hole. We have a limited field, so we have to go down low, probably at about the 10th interspace in the right chest. We made a small incision, tunneled up one rib, and then placed a # 12 French chest tube. We could simultaneously look through with our scope from the inside of the chest and see that no harm was done. We then sutured the tube in place with a little nylon and hooked it up to 20 cm H2O suction. As soon as we did that, we lost our pneumoperitoneum. We had to clamp the tube.

Preparation -- We then prepared the diaphragmatic defect for repair. This involved dividing the contents of the liver that had gone up into the sac, and this was divided with cautery. We then used cautery to freshen up the edges of the diaphragm circumferentially so we could get good healing.

Repair of diaphragmatic hernia -- We used 3-0 Ethibonds on an SH needle. We passed the needle through the abdominal wall. We then did a figure-of-8 on the lower two-thirds of the diaphragmatic defect, with good apposition. The upper part of the defect was then closed with a single 3-0 Ethibond, with good apposition. We then hooked our chest tube up to suction. After initial gush of air/CO2 was removed, the air leak stopped at -20 cm of suction.

At this point, our instrumentation was removed. We did have to place a little stab wound in the rectus sheath in order to facilitate the operation, and will be closed by the urology team at the end of the case. We anticipate we will be able to remove the chest tube at the end of the case or perhaps in the recovery room, depending on how the child does. We will get a chest x-ray to confirm no residual pneumothorax.

COMPLICATIONS: None.

ESTIMATED BLOOD LOSS: Minimal.

I am the attending surgeon, and I was present for all the critical portions of this operation. The laparoscopic pyeloplasty is just starting.

Completed Action List:

* Perform by JENNINGS MD, RUSSELL W on March 26, 2015 10:51 EDT
* Transcribe by on March 26, 2015 11:04 EDT
* Sign by JENNINGS MD, RUSSELL W on March 26, 2015 12:13 EDTRequested on March 26,

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