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Issue 10, Number 11

Electronic Interventional Case Studies

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Yellow highlighted areas in the case studies are key phrases from the documentation used to help you arrive at the appropriate CPT® code(s) for the studies performed.

Green highlighted areas in the case studies are key phrases from the documentation used to help you arrive at the appropriate ICD-9 code(s) for the studies performed.

Blue highlighted areas in the case studies are areas where key phrases used to help you arrive at the appropriate CPT code(s) and ICD-9 code(s) overlap.

CASE 1

GASTRO-JEJUNOSTOMY TUBE EXCHANGE

Clinical History
Amniotic fluid embolism, dehydration

Medications
None

Complications
None

Technique
Informed written consent obtained. The patient was placed supine on the angiography table and the left upper quadrant and the existing gastro-intestinal catheter prepped in sterile fashion. Under fluoroscopic control, a guide wire was advanced through the gastro-jejunostomy catheter which was then removed. A 22 French gastro-jejunostomy catheter was advanced over the guide wire into satisfactory position in the upper jejunum.

Impression
Successful exchange of 22 French gastro-jejunostomy tube.

CASE 2

PLEURX CATHETER PLACEMENT

Indication
Recurrent Malignant Pleural Effusion on Right Side with SOB.

Procedure
After the procedure and its potential risks and benefits as well as alternatives were explained to the patient, informed written consent was obtained. Initial targeted sonography of the right

CASE 2 ... continued on page 2

CASE 2 ... continued from page 1

hemithorax was performed and hardcopy images were obtained for documentation purposes. Scout film of the chest was obtained for documentation purposes. Using sterile technique and ultrasound guidance, the skin and subcutaneous tissue overlying the right pleural effusion in the right mid axillary aspect of the lower right hemithorax was liberally anesthetized with 1% Lidocaine with epinephrine. Using an 11 blade, stab dermatotomy was made followed by blunt dissection. An 18 gauge coaxial needle was introduced into the pleural fluid. The inner stilette was removed. Attention was then directed to creating the subcutaneous tunnel. Several centimeters below the initial dermatotomy, the skin and subcutaneous tissue were liberally anesthetized with 1% Lidocaine with epinephrine. Using an 11 blade, a stab dermatotomy was made followed by blunt dissection. The tissue tract was then liberally anesthetized with 1% Lidocaine with epinephrine. The Pleurx catheter was then tunneled from the inferior to superior dermatotomy. A 0.035 wire was introduced and the coaxial catheter in the pleural fluid was exchanged for sequential dilators, ultimately placing a peel-away sheath. The wire and inner dilator were then exchanged for the Pleurx catheter tubing which was delivered into the pleural space. The peel-away sheath was removed. The catheter was pulled into position. It was then connected to a gravity drainage bag and gravity drainage of the right pleural effusion was performed as well as connecting it to a Vacutainer. Post drainage spot film was obtained for documentation purposes. The catheter was sutured to the patient's skin. Derma balm was applied to the upper dermatotomy.

The patient tolerated the procedure well without any apparent complication.

Findings

Targeted sonography of the right hemithorax demonstrates a large right pleural effusion with associated compressive atelectasis of the underlying right lung. As described, a Pleurx catheter was introduced. Fluoroscopy demonstrates satisfactory positioning of the catheter. Approximately 2200 cc of bloody pleural fluid was removed.

The post images demonstrate significant interval aeration of the lung with a minimal amount of remaining fluid in the right costophrenic angle.

Impression

1. Successful placement of tunneled right chest pleurx catheter.
2. Successful drainage of 2200 cc of bloody right pleural fluid.
3. The pleurx catheter is available for immediate use and can be used prn.

CASE 3

PORT-A-CATH INFUSION-LYSIS

Technique

Informed, written consent was obtained and documented in the patient's chart. The Port-a-Cath in the left upper chest was accessed in an aseptic manner. tPA infusion was started at 2mg/hr. 3 hrs later, the infusion was stopped, the port-cath was flushed and minimal blood return was noticed. Free aspiration was, however, not possible. tPA infusion was started again at 2mg/hr. After two hours, the catheter was checked again, upon stopping the infusion. There was free flow of fluid into the catheter with unimpeded, continuous fluid/blood return on aspiration. The port was heparin locked.

Impression

Port-a-cath tPA infusion with complete restoration of patency, as evidenced by continuous fluid/blood return on aspiration.

CASE 4

CHEST TUBE PLACEMENT WITH TPA INFUSION FOR PLEURAL LYSIS

Indication
LT pleural effusion

Technique
The patient was placed supine on the CT scanning table and the pleural effusion localized. The most accessible site for needle placement was determined. The overlying skin was prepped with Betadine, draped in sterile fashion and 1% lidocaine was used for local anesthesia. Using CT fluoroscopic guidance a 6 French cannula needle was inserted into the pleural space. A 0.035 Benson guidewire was inserted into the pleural space and over the guidewire a 8 French multi-side holed pigtail catheter inserted.

Vacuum aspiration initially produced approximately 100ml of amber-colored fluid.

Through the 8 French Cather 1 mg of TPA diluted in 10 mL of normal saline was injected into the pleural space. Following 15 min. delay the catheter was reconnected to vacuum aspiration with approximately 250 mL of pleural fluid removed.

Post thoracentesis scanning was without evidence of pneumothorax.

CASE 5

BILATERAL PERCUTANEOUS NEPHROSTOMY TUBE PLACEMENTS

Indication
Vesicocutaneous Fistula

Complications
None.

Technique
Informed written consent was obtained and placed on the patient's chart. The patient was brought to the angiography suite and placed on the table in a prone position. Both sides on the back were prepped and draped in the usual sterile fashion.

Under ultrasound guidance, the inferior calyx of the left kidney was accessed usjng a 21 gauge needle. A 0.018 wire was advanced through the needle into the renal pelvis. The needle was exchanged over the wire with a 5 French micro-puncture set sheath. The inner portion of the dilator was removed and wire exchanged for a 0.035 Bentson wire. Serial dilations were done with 6, 8 and 10 Fr dilators. A 10 French nephrostomy tube was advanced over the Bentson wire with locking pigtail in the renal pelvis. Contrast was hand injected through the catheter demonstrating the catheter to be in a good position. The nephrostomy catheter was sutured in place and a percu-stay adhesive was attached as well as a sterile dressing. The catheter was left attached to a gravity drainage bag.

Next, using real-time ultrasound guidance, an accustick needle was advanced into right renal collecting system. A 0.018 inch guide wire was then advanced through needle and nee e exchanged with a coaxial accustick system sheath. A 0.035 inch wire was then advanced through sheath. Serial fascial dilatations were then performed followed by placement of a 10 French drainage catheter. Contrast was hand injected through the catheter demonstrating the catheter to be in a good position. The nephrostomy catheter was sutured in place and a percu-stay adhesive was attached as well as a sterile dressing. The catheter was left attached to a gravity drainage bag.

The patient tolerated the procedure well, and left the angiography suite in stable condition.

Findings
Successful placement of 10 Fr APD catheters in both kidneys and connected to external gravity drainage.

Impression
Successful placement of 10 Fr APD catheters in both kidneys and connected to external gravity drainage.

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HOW DID YOU DO?

The above cases should be coded as follows:

CASE 1	ICD-9
49452	673.10
	276.51
	V58.82
CASE 2	**ICD-9**
75989	511.81
32550	786.05
CASE 3	**ICD-9**
36593	996.74
CASE 4	**ICD-9**
75989	511.89
32551	
32561	
CASE 5	**ICD-9**
74475	596.2
50392	
74475	
50392	

THANK YOU!