response rate. Nearly 75.6% of the surveyed staff felt that the EMR system met their needs. Almost 69.7% considered EMR system as an easy-to-use system, with 84.8% preferring EMR to the use of paper record. About 63.3% of the surveyed staff agreed that the EMR system reduces the preprocedural preparation time. Nearly 51.7% of the responders did not think that the EMR system reduces the duration of patient stay in holding area after the procedure. Majority of the responders (62%) considered that the EMR system reduces the risk of medical errors when compared with paper records. **Conclusion:** The EMR system has the capability of significantly changing the workflow in VIR department. Our survey results indicate that the majority of users felt that the EMR system is easy to use and it met their needs.

OC309

Comparative Effectiveness of Percutaneous Ethanol Injection Therapy and Parathyroidectomy in the Treatment of Secondary and Tertiary Hyperparathyroidism

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Background: Secondary and tertiary hyperparathyroidism is a common complication of chronic renal failure. Percutaneous ethanol injection therapy (PEIT) appears to be able to control appropriate parathyroid function alternatively to surgery. **Methods:** The records of 91 patients with chronic renal failure with secondary or tertiary hyperparathyroidism between January 2006 and July 2015 were reviewed retrospectively. Fifty-five patients underwent PEIT, while 36 patients underwent parathyroidectomy. Effectiveness and complication were compared between the two groups. **Results:** Parathyroid hormone level (PTH) after treatment <160 pg/mL was used to indicate successfulness of the treatment. The PEIT group showed lesser effectiveness than surgery group; 1.8% versus 61.1%, $P = 0.000$, odds ratio (OR) = 0.012 and 95% confidence interval (CI) = 0.001–0.970. There was no complication in the PEIT group. Symptomatic hypocalcemia was found to be 11.1% in the surgery group; $P = 0.011$, OR = 0.889, and 95% CI = 0.792–0.998. **Conclusion:** The efficacy of PEIT in the treatment of secondary and tertiary hyperparathyroidism was much lower than that of parathyroidectomy.

OC310

Percutaneous Image-Guided Peritoneal Dialysis Catheter Insertion: Retrospective Review of 58 Patients

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Background: This study aimed to retrospectively evaluate the short-term outcomes of image-guided percutaneous peritoneal dialysis (PD) catheter insertion. **Methods:** From August 2015 to October 2017, a total of 58 consecutive patients (29 males), with

a mean age of 47.7 years (15–96 years), underwent percutaneous PD catheter insertion. Peritoneal catheter was the initial method of dialysis in 48 patients (83%), while 9 (17%) patients were on regular hemodialysis and 1 patient had a history of PD through a surgically placed catheter. Dwelling time was defined as the time from insertion to the last clinical follow-up or catheter removal. Procedure- and catheter-related complications were recorded. **Results:** Catheter insertion was successful in 57 patients (98%). One procedure was initially aborted after inferior epigastric artery injury that resulted in pseudoaneurysm requiring thrombin injection. This patient underwent uneventful catheter insertion on the other side few days later, rendering the overall technical success of 100%. Another patient had procedure-related peritonitis 48 h following the initial insertion and was treated by antibiotics and catheter exchange. Dialysis was successfully initiated in 55 patients (94%) and failed in the remaining 3 patients due to persistent blockage from previous PD-related adhesions ($n = 1$), large seminal vesicle cysts occupying the pelvis (Zinner syndrome) ($n = 1$), and one patient remained on hemodialysis. During a mean dwelling time of 299 days (21–819 days), dialysis remains ongoing in 32 patients (55%). A total of 23 catheters were removed during the mean time of 170 days (12–699 days) as follows: postrenal transplant ($n = 9$), patient's preference for hemodialysis ($n = 4$), peritonitis ($n = 5$), need for high-rate hemodialysis ($n = 1$), pleuroperitoneal connection ($n = 1$), leak ($n = 1$), wound infection ($n = 1$), and persistent blockage ($n = 1$). Catheter dysfunction due to blockage or tip migration occurred in 13% (8/58), with subsequent relapsing peritonitis necessitating catheter removal in five patients despite repeated manipulation and exchange. Two patients (2/8) had successful manipulation using a stiff wire with ongoing dialysis and one patient died from other comorbidities. Catheter-related peritonitis occurred in 26% (15/58) of patients, which was managed by antibiotics in 9 cases with ongoing dialysis at last follow-up and catheter removal in 5 patients. One catheter was complicated by the overlying skin necrosis due to excessive weight loss after insertion, which was managed by skin closure with sutures. One patient had tiny small bowel perforation during wire manipulation of malpositioned catheter, which was treated with antibiotics with no consequences. Two patients died during the follow-up time due to worsening comorbidities. **Conclusion:** Percutaneous image-guided placement of PD catheter is an effective minimally invasive technique. Proper catheter maintenance is essential to prevent catheter dysfunction and peritonitis, which represent the most frequent complications.

OC311

Difficulties and Challenging Cases in Radiological Intervention Management of Postcholecystectomy Biliary Injury and Posthepaticojejunostomy Complications: More Than 20 Years' Experience from Tertiary Care Centers

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Background: In the late 1980s after the first successful laparoscopic cholecystectomy in Europe, this minimally invasive surgery rapidly became the accepted technique for the treatment of gallbladder disease in the United States of America. The rapid acceptance of this new technique by the medical profession and the public was related to the obvious advantages of reduced cost, decreased hospital length of stay, and increased patients' satisfaction (Nezam H Afdhal *et al.*, 2017). Common bile duct (CBD) injuries are the most serious and feared complications of laparoscopic cholecystectomy since they cause substantial morbidity and increased hospital stay and increasingly often are the subject of legal disputes (Chir Ital., 2007). Recommendation, according to the last update as well known in the literatures, for the management of complications of cholecystectomy in biliary duct injuries should always be approached by an experienced multidisciplinary team consisting of surgeons, interventional gastroenterologists, and interventional radiologists. **Methods:** Patients presented at any time with different types of postcholecystectomy biliary injury and posthepaticojejunostomy complications were subjected to intervention radiological procedures with and/or without endoscopic-radiologic rendezvous. **Results:** We succeeded to manage 840 cases of postcholecystectomy biliary injury (783 cases) and posthepaticojejunostomy complications (57 cases) by percutaneous transhepatic biliary access, throughout more than 20 years starting in October 1995 when we had established the 1st intervention unit in upper Egypt, at Assiut University Hospital, and lately in other institutional centers in the Kingdom of Saudi Arabia. **Conclusion:** Biliary injuries or complications, following cholecystectomy or postcholecystectomy, usually can be treated within tertiary referral hepatobiliary multidisciplinary center, and major surgery can be avoided and performed only in selective conditions.

OC312

Percutaneous Endoscopic Gastrostomy Large-Bore Tube Application without the Use of Endoscope: Single-Center Experience on 86 Neurologically Compromised Patients

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Background: Despite being an established method of enteral feeding, percutaneous fluoroscopic-guided small-bore push gastrostomy tubes are more prone to tube occlusion and dislodgement. This study describes an adapted alternative of nonendoscopic technique to apply large-bore mushroom-head gastrostomy tubes originally designed to be applied endoscopically. **Methods:** Between January 2015 and November 2017, 86 gastrostomy tubes were placed in 86 neurologically compromised patients. 24F mushroom-head tubes were used. The stomach was filled with air via nasogastric tube through which a Dormia basket or a large Snare was introduced. A 16G Angiocath was advanced through a skin puncture into the Dormia basket at the gastric body level through which bifid guidewire was extracted by the Dormia basket or the snare. The gastrostomy tube was bound to the wire and pulled under fluoroscopic guidance. Technical success and procedural

complications were assessed and regular follow-up was done to ensure tube function and monitor complications. **Results:** A 100% technical success was achieved defined as successful positioning of the stent, bypassing the leakage. Distal migration occurred twice in the same patient with balloon repositioning. Persistence of the leakage after stent removal took place in four patients (all were referred late 20 days plus postsurgery), three of which had re-surgery and one patient who had residual tubular cutaneous-anastomosis fistula had track coiling with cessation of leakage. **Conclusion:** Fluoroscopic-guided esophageal stenting might be effective in bypassing anastomotic leakages following bariatric surgeries; however, it should be considered as soon as significant leakage is diagnosed and should be considered before re-surgery. Placement of the stents was feasible without major procedure-related complications.

OC313

Role of Computed Tomography-Guided Percutaneous Celiac Plexus Neurolysis in Relieving Pain Due to Abdominal Malignancy

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Background: Cancer-related pain remains a common problem in oncologic practice and has major influence on patient's comfort, tolerance of therapies, and probably survival. This study aims to assess the efficacy of Computed tomography (CT)-guided celiac plexus neurolysis (CPN) to relieve pain in patients with advanced abdominal cancer. **Methods:** CT-guided CPN through anterior technique was done for 20 adult patients (their ages ranges between 30 and 70 years) suffering from abdominal cancer pain using ethanol (90%) as a neurolytic agent. To assess the degree of pain relief, the visual analog score (VAS) was used to assess the degree of pain; immediately after injection, 1 week, 1 month, and 3 months' post-CPN procedure. **Results:** Marked decrease of the pain intensity in all the patients was noted as a sharp fall of the VAS score immediately after injection of the neurolytic agent and more pronounced in the 1st day post-CPN with the relatively stationary course for 3 months. The VAS score base line was 9.1 ± 0.85 . One day after CPN, pain severity decreased markedly to 1.3 ± 0.71 , 1 week later, the decrease in pain severity almost maintained at the same level 1.7 ± 0.89 , 1 month after CPN, the decrease in pain severity also maintained at the same level 1.9 ± 0.79 and 3 months after CPN pain severity still decreased significantly to 2.3 ± 1.02 . The decline in the severity of pain at its average before and at different sequences after CPN recorded high significant statistical difference $P < 0.001$. **Conclusion:** CT-guided CPN is an effective and safe method for relieving severe pain due to abdominal cancer.