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The Outcomes of Percutaneous Transhepatic Cholangiography for the Palliation of Malignant Jaundice in England Between 2001 and 2014

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Background: Relieving obstructive jaundice in patients with inoperable pancreatobiliary cancers improves quality of life and permits palliative chemotherapy. Percutaneous transhepatic cholangiography (PTC) with biliary drainage and/or biliary stenting and are commonly used to relieve obstructive jaundice in such patients, and we have examined outcomes of PTC in a national patient cohort. **Methods:** A retrospective cohort study of all patients undergoing PTC as part of palliative therapy of pancreatobiliary cancer in England between April 2001 and March 2014, identified from Hospital Episode Statistics. Multivariate logistic regression analysis was used to examine associations with mortality. **Results:** A total of 16,822 individuals undergoing PTC were analyzed (median age 72 [range 19–104], 50.3% males). About 58% had pancreatic and 30.1% had biliary tract cancer. In-hospital and 30-day mortality was 15.3 (95% confidence interval 14.7%–15.9%) and 23.1 (22.4%–23.8%), respectively. About 36% suffered a complication: sepsis (16.5%), stent blockage or displacement (6.4%), and acute kidney injury (4.7%). Thirty-day mortality was associated with increasing age (81+ odds ratio 2.68 [2.37–3.03], $P < 0.001$), comorbidity (Charlson score 20+, 3.10 [2.64–3.65], $P < 0.001$), and preexisting renal dysfunction (2.37 [2.12–2.65], $P < 0.001$), increasing deprivation (1.28 [1.13–1.44], $P < 0.001$), and cancer type other than pancreatic (unspecified biliary tract 1.28 [1.08–1.52], $P = 0.004$). Females had a better prognosis (0.91 [0.84–0.98], $P = 0.011$), as did those undergoing PTC in a "high-volume" provider (84–180 PTCs 0.68 [0.58–0.79], $P < 0.001$). **Conclusion:** In subjects undergoing PTC for the palliative relief of malignant jaundice, 30-day mortality is 23.1% and complications occur in 36%. Mortality is higher in older males, those with increasing comorbidity and when the procedure is carried out by operators performing low volumes of PTC.

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Minimally Invasive Treatment of Benign Gallbladder Pathology in Nonsurgical Candidates: Cystic Duct Stenting

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Background: M. R. Akhtar, A. Zaman, T. Fotheringham; Acute cholecystitis in critically ill patients carries a high mortality rate. Patients who are unresponsive to medical management and unsuitable for immediate cholecystectomy require an interventional solution. Percutaneous cholecystostomy is an effective bridging therapy providing immediate symptom control until surgery. A subgroup of patients with severe comorbidities will never be suitable for surgery; these patients can become dependent on long-term external drainage to avert recurrent cholecystitis. Percutaneous cystic duct (cholecystoduodenal) stenting offers a solution to internalize these drains in both delayed surgical candidates and nonsurgical candidates. We present our series with a long-term follow-up demonstrating the benefits of this procedure. **Methods:** Eleven patients unfit for surgery in our institution underwent cystic duct stent insertion for the management of acute cholecystitis from July 2009 to April 2017. A two-stage procedure involved an initial percutaneous transhepatic cholecystostomy and a subsequent cystic duct stent insertion. An 8 Fr × 16 cm transplant ureteric stent was positioned with the proximal loop in the gallbladder and the distal loop in the duodenum. The cholecystostomy drain was removed at a later date after a check cholangiogram. **Results:** One patient presented with gallbladder perforation, seven patients with acute cholecystitis, one with gangrenous cholecystitis, and two patients with gallbladder empyema. Ten cases were successful at the first attempt. One case was unsuccessful (unfavorable cholecystostomy site for the second stage) second attempt not performed as the clinical team decided on a different management plan. The technical success rate was 91% and no immediate major complications. **Conclusion:** Cystic duct stenting has a high technical success rate with a low rate of complications. The good clinical outcome with no reintervention. This series has also demonstrated a wider indication of benign diseases for this procedure. Cystic duct stenting should be considered as a temporary and long-term option in critically ill-cholecystitis patients.

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Removal of Embedded Tunneled Hemodialysis Catheters Using Endoluminal Balloon Dilatation: A Single-Center Experience

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Background: Increasing frequency of tunneled hemodialysis catheter usage increases the burden for removal or exchange. A small proportion of dialysis catheter failed to be removed by conventional techniques. **Methods:** We retrospectively report a series of 12 cases in our institution between September 2015 and December 2017 who failed removal of tunneled dialysis catheters by conventional methods. The study cohort included 11 males and 1 female with mean age of 44 (12–90 years). The mean catheter dwelling time was 770 (153–1442 days). Reason for catheter removal included dysfunctional catheter ($n = 5$), line sepsis ($n = 4$), and switching to functioning fistula ($n = 1$). Catheter types included GlidePath Bard ($n = 2$), Vaxel Boston Scientific ($n = 2$), HemoStar Bard PV ($n = 2$), Palindrome Medtronic ($n = 2$), Equistream Bard ($n = 1$), Medcomp ($n = 1$), and unknown catheter. The insertion sites were internal jugular vein ($n = 11$)

and femoral vein (n = 1). Nine cases were performed under local and 3 under general anesthesia. Single-lumen endoluminal balloon dilatation is done in eight cases and double-lumen dilatation in four cases. Low profile 0.018" or 0.014" balloons ranging from 5–8 mm were used. **Results:** All catheters were removed safely without any minor or major adverse events. In one case, the catheter was shredded completely but removed over the balloon with no complications. **Conclusion:** Minimally invasive endoluminal balloon dilatation of tunneled dialysis catheter is a safe and effective technique for removing embedded catheters.

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Management of Arterial Injuries Related to Central Venous Access: A Single Institution Experience

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Background: Retrospectively identify the types of arterial injuries related to central venous access and management techniques with long-term outcomes. **Methods:** Between January 2007 and November 2017, a total of 20 patients (13 females) were included with a mean age of 63 (28–89 years) and mean body mass index of 25.75 (13.3–36.5). Venous access procedures included central venous catheter (CVC) placement, dialysis line insertion, or endovascular venous procedures. The study excluded patients who had arterial injuries related to arterial access, such as postarterial line placement, postangiography, or percutaneous coronary interventions. **Results:** Iatrogenic arterial injuries occurred after attempted venous access procedures into the common femoral vein (n = 18) and subclavian vein (n = 2). Injuries were related to CVC placement (n = 5), temporary dialysis catheter (n = 14), and inferior vena cava filter insertion (n = 1). Nine patients had transarterial venous catheter insertion complicated by active bleeding from pseudoaneurysm and arteriovenous fistula. Other injuries included isolated fistula (n = 3), isolated pseudoaneurysm (n = 4), isolated branch injury (n = 2), and intra-arterial insertion (n = 2). Endovascular management was done with stent-graft placement (n = 14), embolization of bleeding vessel (n = 2), thrombin injection for pseudoaneurysm (n = 2), or by compression/conservative management (n = 2). Technical success was achieved in 100%. One patient required repeat angiography and embolization of isolated branch following stent-graft placement to control bleeding fistula and pseudoaneurysm. Clinical success was achieved in all patients. Procedure-related complications included puncture site hematoma (n = 1), partially occlusive thrombus/spasm of the deep femoral artery after stent graft placement. Six patients (33%) died in <30 days after the procedure (3–20 days) from other comorbidities. Three additional patients (16%) died during the same admission of the procedure (38–114 days). In 7 out of 14 patients, who survived after stent-graft placement, there were no reported complaints related to possible stent stenosis or occlusion at mean follow-up time of 5 years (50 days–8.64 years). **Conclusion:** Despite technically successful endovascular management of arterial injuries related to venous access in critically ill patients, mortality rate remains high due to other comorbidities. Allowing for the small sample size, stent-graft placement for arterial injuries in this cohort of patients appears to be an effective option with high long-term patency rate.

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Port a Cath Insertion by Interventional Radiologists Tips and Tricks

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Background: Modern chemotherapeutic management depends on repeated and safe access to the venous system for the delivery of drugs, fluids, and blood products and the periodic monitoring of the effects of treatment. Peripheral veins are rapidly destroyed by repeated venipuncture and by long-term chemotherapy. The long-term venous access devices (VADs) have helped to overcome the need for repeated peripheral or central venous puncture. One frequently employed type of venous access system is the Port-A-Cath system. The Port-A-Cath is a totally implantable VAD in which a conventional central venous catheter is attached to a subcutaneous injection port usually on the chest wall. The usage of ports for a wide variety of indications has also brought a wide spectrum of complications that are well documented in the existing literature. **Methods:** Two hundred and ninety patients were reviewed retrospectively in a 5 years' period (2011–2016) for the site of insertion, the type of the port the proper port function and the potential complications. **Results:** The results were in favor of low incidence of complications with some precautions (11.6%) as regard the insertion technique. **Conclusion:** Port a cath is an excellent auxiliary device for patients receiving regular chemotherapy conditioning that proper steps for insertion are followed

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Effectiveness of Inferior Vena Cava Filter Departmental Follow-Up Form to Improve Filter Retrieval Rates: a Single-Center Experience

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Background: Inferior vena cava (IVC) filter is a device inserted in patients who are prone to develop pulmonary embolism (PE) and deep venous thrombosis (DVT). PE and DVT are one of the most common medical conditions present in patients who have venous thromboembolism. Venous thromboembolism begins as DVT in the lower limbs which detaches and travels through IVC. The clot ends up as PE blocking the heart and lung circulation. One in 10,000 people are diagnosed with PE and increases to 5 in 1000 by the age of 80 annually. PE leads to hypopnea, chest pain, tachycardia, and in severe cases heart failure, loss of consciousness, and death. In the United States, 25%–40% of