

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.

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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.

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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.

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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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