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Poster

Laparoscopic peritoneal dialysis catheter insertion to facilitate urgent inpatient dialysis for patients with central venous access issues

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Category: Oral

Aims: Peritoneal dialysis (PD) is an effective treatment for end-stage renal disease (ESRD). It is important to consider PD for two particular patient groups: those with rapidly progressive CKD or late presentation who might default to haemodialysis (HD) and those established on HD who have central venous disease. This study describes a case series of laparoscopic PD catheter insertions facilitating urgent inpatient dialysis in patients with central venous access issues.

Materials and Methods: Patients who underwent laparoscopic PD catheter insertion for urgent dialysis were identified from a prospective PD database. Clinical demographics, surgical details, length of stay and complications were analysed. A total of 37 laparoscopic PD catheter insertions were performed over a 10-month period. Four PD catheters (11%) were used for urgent inpatient dialysis.

Results: Reasons for urgent PD included: central vein stenosis, central line-related sepsis, patient refusing HD line and patient (no AVF options plus previous HD line) relocating to healthcare setting where HD unavailable. Mean time from insertion to first PD flush was 3 days. No patients required HD. Mean length of admission post insertion was 9.5 days (range 3-17). One patient developed pneumonia as an inpatient. Another patient developed an exit site infection after discharge. outpatient PD after a mean follow up of 153 days (range 60-307). No patients have required further intervention/admission.

Conclusions: Laparoscopic PD catheter insertion can facilitate PD as an urgent dialysis modality. Special attention to facilitate PD catheter insertion should be given to those with rapidly progressive CKD with insufficient time for AVF maturation and to those with HD line related sepsis or central venous disease.

Ischaemic Monomelic Neuropathy of the lower limb

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Category: Oral

Aims: To illustrate a rare presentation of lower limb ischemic monomelic neuropathy

Materials and Methods: A case presentation of a female patient with ischemic monomelic neuropathy of the lower limbs immediately following an ePTFE graft fem fem loop graft for dialysis. Preoperative duplex demonstrated good triphasic flow of the common femoral artery with no significant arterio-occlusive disease. Under Spinal anaesthesia PTFE graft was used to create the fistula. Adequate triphasic wave signal was demonstrated by doppler, and a notable thrill was palpated, immediately following surgery. However, post-operatively the patient developed progressive numbness and paraesthesia with motor weakness affecting

Results: Following an uneventful arteriovenous fistula ligation, the patient reported immediate improvement in her symptoms. A month after surgery, she made a full recovery of her sensorimotor deficit following a period of physiotherapy.

Conclusions: IMN is a rarely reported type of ischaemic neuropathy and represents less than one percent of all vascular access procedures. This syndrome shares a similar pathogenesis to the more common vascular steal phenomenon, where a reduced blood supply to a distal extremity owing to shunting of blood into the fistula. A clinical diagnosis allows for rapid shunt revision which may result in partial or full neurological recovery

Overcoming the challenges of introducing plastic fistula cannula into an Australian haemodialysis unit: 8 years' experience

Authors: Vicki Smith - Renal Services Barwon Health,

Category: Oral

Aims: To discuss the challenges faced when introducing plastic fistula cannula into an Australian dialysis unit.

Materials and Methods: Fistula cannulation has traditionally been undertaken using metal dialysis needles. In 2013, after an extended period of education and training, plastic fistula cannulae were introduced into the renal service as part of the first cannulation procedure (FCP). This procedure required plastic cannulae to be used on all patients with new fistula for a specified period of time, in the hope of decreasing adverse cannulation events for patients.

Results: There were many obstacles to overcome when introducing a new product and technique to staff who have cannulated with metal needles for many years. Staff resistance to change, fear of losing expert status, fear of failure and some that did not see the need to change, nor the possible advantages to patient outcomes. Other staff embraced the change and championed plastic cannula use within the unit teams. Ultimately time was determined as an important variable when introducing change: time to learn technique, time to train staff, time to introduce change and time to become proficient.

Conclusions: Change management is difficult, particularly trying to change a technique that has been used since haemodialysis fistula were first created. Dedication and perseverance are required to continually encourage and educate on practice change. To do this units need to have 'nurse champions' who drive the change and role model technique to others. Adequate education and time are also important elements when trying to overcome barriers to the implementation of a successful cannulation program with plastic fistula cannula.

Advanced Kidney Disease Patient Portal: Implementation and Evaluation with Haemodialysis Patients

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Category: Oral

Aims: Patients on haemodialysis (HD) face complex care pathways, a high treatment burden and lower quality-of-life. We have been developing a patient portal to help them better understand and navigate their care pathways. The aim of this study was to determine the benefits and disadvantages of digital data collection over paper, the suitability of the design approach and what situational accessibility and usability issues need to be considered for development of in-hospital systems for HD patients.

Materials and Methods: A case study design approach was followed, detailing the patient portal development and deployment within the context of a HD patient population. This was completed in three parts: (1) iterative development of a patient portal with multidisciplinary group, collecting qualitative feedback to inform refined set of design requirements (33 meetings, 7 experts), (2) Evaluation of the patient portal, through qualitative feedback

from patient interviews and a usability evaluation (System Usability Scale, n=26), (3) Qualitative feedback of the study coordinators based on observations during study.

Results: Iterative development cycles facilitated the design, development and evaluation of the patient portal, and allowed refinement of the system's design requirements and functionalities. The overall average usability score was 86.9 (considered as "good"), with minimum score of 72.5 placing the system in the "high" acceptability range. Most patients preferred the tablet-hosted questionnaires (11/19) or had no preference (5/19), while 3 would have preferred paper. Both researcher and patients did note completion of the tablet-based questionnaires was easier and more feasible than with pen-and-paper.

Conclusions: Key lessons include a wide preference for tablet-based input vs paper, identification of HD-specific accessibility issues and situational impairment, benefits of self-completed digital data collection in overcoming such issues and promoting patient independence and privacy, with considerations for maintaining perceived value and engagement with such systems and when to offer alternatives.

Role of Point of Care Ultrasound in enhancing dialysis access care

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Category: Oral

Aims: Maintaining a functioning Arteriovenous fistula /Graft (AVF/G) is an on-going challenge of renal dialysis units and clinical assessment is the most used by dialysis nurses to ascertain complications. Ultrasound (USS) is used to diagnose AVF/G related complications and patients either required to attend to specialist centres to obtain them or offered by outreach team in regular intervals.

Thus, we wanted to ascertain the role of Point of Care Ultrasound (POCUS) using Ballater probe in our dialysis patients.

Materials and Methods: The pilot study was performed in single trust and four dialysis nurses with excellent clinical skills to assess & use the AVF/G were trained to perform vascular ultrasound with colour flow.

They decided on the need for USS (with remote support as deemed necessary) and collected patient demographics, indications, and outcomes along with patient satisfaction.

Results: A total of 50 patients were scanned with median age of 51.9 years and commonest reason was to assess the usability of AVF/G (54%) and it also reduced their need to obtain additional input.

All the patients were satisfied by the additional care offered to them by their own HD nurses. Our dialysis nurses felt empowered and observed increasing engagement of patients towards using AVF/G.

Conclusions: The results of our pilot study show Point of Care Ultrasound seems to enhance access care offered to our patients. The additional benefits on staff & patient satisfaction may help units to increase self care. We aim to pursue a study involving a larger patient population and also, measure the patient & staff satisfaction.

Renal access surgery during the COVID-19 pandemic and beyond.

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Category: Poster

Aims: The COVID-19 pandemic caused major disruptions to surgical activity across the UK. According to the Federation of Surgical Specialty Association guidelines, vascular access (VA) surgery was classed as priority 3, with a recommendation for the primary creation of AVF to be postponed.

This audit serves to provide an overview of the effect of COVID on vascular access activities. It aims to highlight key adaptations to service delivery in the renal access pathway during the pandemic, as well as potential areas of improvement to achieve the recent GIRFT recommendations for renal access.

Materials and Methods: As the first wave of COVID-19 pandemic hit, elective surgery stopped on 13th March and it was not until August that elective activity was restored before stopping again for the second wave in December.

Data of vascular access activity in 2020 was collected using Electronic patient records (EPR) and Renal database (Renalware). Previous vascular access audits were used to provide comparative data. Service outcome measures were assessed against KDOQI and GIRFT guidelines.

Results: Renal access surgery did not have priority. There was a coordinated effort to expand activity across hospital sites and Interventional radiology. In 2020, 214 vascular access procedures were performed, down 27% from 2019. Ad hoc day surgery unit theatres and Independent sector were made available for urgent cases. This led to an increase in Day surgery numbers by over 50% from 2019. The percentage of incident dialysis population which started dialysis on a permanent access was the same as in 2019. Face to face clinics were replaced by virtual clinics and outreach clinics in satellite units.

Conclusions: The COVID-19 pandemic revealed vulnerabilities in the delivery of healthcare to patients with chronic kidney disease. This provides a valuable opportunity to re-evaluate and implement resilient pathways in the event of future pandemics or other healthcare crises. In order to achieve this, it requires the collaborative effort of a multi-disciplinary team, closer liaison with the vascular laboratory, day surgery unit and different hospital sites (including independent sector facilities).

Effects of Systemic Anticoagulation and Antiplatelet Therapy on Vascular Access in Haemodialysis Patients

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Category: Poster

Aims: To assess the impact of antiplatelet and anticoagulation therapy on the patency of access and bleeding risk in a cohort of haemodialysis patients.

Materials and Methods: A list of patients who started haemodialysis in Lanarkshire from January 2018 to December 2019 was compiled. A retrospective review of online medical records was performed. Patients on anticoagulation or antiplatelet therapy were compared to those not on any anticoagulation or antiplatelet therapy. Rates of vascular access loss and bleeding incidents were compared.

Results: Of those on systemic antiplatelets or anticoagulants, 58% lost vascular access within the study period compared to 40% in the control group. The average time from gaining access to loss of access was 265 days in the

antiplatelet and anticoagulant group, compared to 245 in the control group. There were no major bleeding incidents recorded in either group.

Conclusions: In this cohort of patients, there was no measurable reduction in vascular access loss with antiplatelet or anticoagulation therapy versus control. There did not seem to be an increased risk of bleeding incidents in the antiplatelet or anticoagulation group.

