11TH ANNUAL TRANSPLANT, UROLOGY & NEPHROLOGY CONFERENCE

Transplant, Urology & Nephrology – Looking In To The Future

Book Of Abstracts

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Host : Transplant, Urology & Nephrology Directorate, Beaumont Hospital

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(Northern Cross, Dublin)

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Poster No: 1

Semaglutide: Weight reduction in obese patients with ESRD for transplant eligibility

Author: Princess Andal

Background:

Renal transplantation is the best choice of treatment to improve survival rate and quality of life among patients with advanced kidney disease, compared to regular renal replacement therapy. However obesity has become a barrier to achieved eligibility for renal transplantation. Obesity is associated with increased risk of surgical complications.

Semaglutide is a pharmacotherapy which will help obese patients with ESRD lose weight to meet renal transplantation target weight requirement. Semaglutide drug is only available with doctor's prescription. It is a glucagon like peptide-1 (GLP-1) receptor antagonist which can also be used to treat type 2 diabetes alongside exercise and diet for effective control of blood sugar. It is useful in weight reduction in patients with obesity. It has also gained interest in its efficacy in reducing complications as a result of obesity.

Aim:

To promote weight reduction in obese patients with ESRD to be considered eligible for Renal Transplantation.

Methods:

Systematically searched databases such as PubMed, Cochrane, ResearchGate, Google Scholar, Wiley Online Library limited between the year 2013 to 2022.

Results:

A small Semaglutide trial was completed in one of the HSE dialysis units. The participants included 14 obese adults on renal replacement therapy. The data analysed showed positive results according to one of the nephrology professors who is the lead clinician for the study. Although results are yet to be officially published, he reported verbally during an informal discussion that early data yielded effective results. There was a significant weight reduction in all the patients participating after only five months of therapy. Semaglutide subcutaneous injection administration was safe and well tolerated by patients.

Poster No: 2

Mechanism, Causes and Management of Intradialytic Hypotension, an education package for dialysis nurses

Author: Lilibeth Pinez

Background: The aim of every member of staff working in Beaumont hospitals Nephrology department is to enhance patient's dialysis treatments, lessen complications, attain prescribed dialysis clearance and improve patient's wellbeing (Beaumont hospital, department of Nephrology & Renal nursing, 2011). The most common side effect seen on haemodialysis is intradialytic hypotension (IDH), which increases morbidity and mortality for patients involved (Chou, J.A. et al. 2017).

IDH as defined by KDOQI 2002 is a "decrease in systolic BP greater or equal to 20mmhg or a decrease in the mean arterial pressure of greater or equal to 10mmhg with accompanying symptoms that includes abdominal discomfort, yawning, sighing, nausea, muscle cramps, restlessness, dizziness fainting, and anxiety". These varying symptoms that patients experience lead to unpleasant dialysis sessions and often result in a patient feeling anxious to return for haemodialysis treatment.

The risk factors for developing IDH can include diabetes mellitus, cardiovascular disease, ischaemic heart disease, arrhythmias, vascular calcification, autonomic dysfunction, poor nutritional status, hypalbuminaemia, female gender, age > 65 years old, pre dialysis systolic BP <100 mmHg, high body mass index, severe anaemia & high intradialytic weight gain (Kanbay M. et al. 2020).

The recurring interruption of adequate organ perfusion during significant IDH events can affect the cardiovascular system, central nervous system, kidneys and the gastrointestinal system (Kanbay M. et al. 2020).

Aim: To formulate a structured educational programme for new haemodialysis nurses in the aim to enhance understanding to the mechanism, causes and management of Intradialytic hypotension.

Method: The material for the education package was sourced through a thorough literature search conducted by exploring databases supplied by the RCSI library online. Articles from all English literature between 2012 to 2022 were utilised.

The education programme will be delivered in small group sessions after handover. Posters with information on IDH will be displayed also as a learning resource.

Result: This education project is in the process of being implemented. A questionnaire will be completed pre and post staff education to allow for auditing the effectiveness of the programme

Poster No: 3

Creation of Audio Visual Supportsc for Shared Care in Haemodialysis

Author: Emer Kenny

Haemodialysis Care requires a change in health delivery moving from a model of treatment provision to one that facilitates training in order to meet individual needs and preferences, enabling self-management (Wilkie and Barnes, 2019). Shared Care within a unit enables health care professionals to nurture, support the patient and move towards collaboration in care provision in the haemodialysis setting.

Background to the initiative:

Shared Care is where the health care team offers the choice, support and training for patients to participate in the tasks related to their HD treatment to the extent that they wish (Wilkie 2019).Such a programme within the dialysis unit of an acute hospital setting led by the RANP ensures the patients are offered support and training to participate in their treatment to the extent that they wish. It develops patient self –management skills which support patients to take interest and a greater role in their care.

Aims/Objectives:

The Fresenius 6008 machine unit is the primary machine for Shared Care and the patients are also educated on the use of the Fresenius 5008. Patients are encouraged regardless of age to participate in as little or as detailed as they would like to learn. Patients are at various levels of care and independence within the unit. All patients involved in the programme have the support of the unit staff throughout the dialysis treatments.

Methods: How you went about the initiative:

A standardised evidence based approach for caring for patients choosing shared care Haemodialysis was implemented with the author, Consultant and the HD CNM2 /CNM3 .A Shared Care Policy and supporting documentation are accessible via the hospital Q Pulse system.

Outcome/Results of the initiative: June 2022

Nine patients were asked to participate in a Shared Care Survey/Audit and five returned the audit form.

Identified need	Communication aides-use of medical vocabulary and photographs to support the training. Information Posters to be visible on Shared Care. Audio Visual Supports-A board to be placed in the waiting room to be accessible with information on the TV screen regarding Shared Care.
Plan to address	The RANP in conjunction with the Education Technology Project lead nurse are developing training video's to assist with this programme which will be accessed by patients in the Dialysis Unit to support the hands on learning. Images will be printed on completion of video's and made accessible
Evaluation of the plan	Survey all patients again Dec 2022

Plan for sustainability/future plans:

Expand the program and have more patients involved

Incorporate a buddy system within the unit-Existing Shared Care Patient to support a new patient by being placed beside them within the unit.

Poster No: 4

A Prospective Study in Nurse-led Clinics and Community Nursing using the Transurethral Catheterisation Safety Valve (TUCSV©) for the Prevention of Catheter Balloon Inflation Injury of the Urethra.

Authors: Abitang M.J. 1 , O'Connor E.M 1 , Croghan S.M. 2 , Baird O. 2 , Fallon J. 2 , Loughman P. 2 , Esoof J. 2 , Giri S.K. 2 , Rosengrave S. 3 , Chute A. 3 , O'Looney A.M 4 , Shanahan D. 4 , Ryan C. 4

Introduction & Objectives: Urinary catheterisation is one of the most common procedures carried out in both the hospital and community setting. Female catheterisation falls within the scope of nursing practice. However, specific training is required to perform male and suprapubic catheterisation because of the particular risks of these procedures, including urethral catheter balloon injury (CBI). CBI of the urethra is an avoidable iatrogenic injury occurring in 1.3% of hospitalised male patients. The TUCSV© is a novel safety device designed to prevent CBIs by venting through a pressure relief valve if the balloon is inflated in the urethra. The aim of this clinical study was to prospectively assess the TUCSV's ability to prevent urethral CBI in nurse-led clinics and the community as part of a practice development initiative.

Materials & Methods: The incidence of CBI was recorded in 2 hospital groups over a 3-month period. The TUCSV was then introduced to 1 urodynamics clinic, 1 nurse-led day ward, and 2 community nursing intervention teams for a 3-month study period (April- July 2021). All nurses that participated in the study were trained in performing male urethral and suprapubic catheterisation. A 7-item data sticker with a QR code was used to record all data including "venting" from the TUCSV. During the 3-month study, all CBIs in the 2 hospital groups were recorded by the urology team on-call.

Results: Of 699 catheterisations carried out using the TUCSV during the 3-month study period by both urology doctors and nurses, 181 (26.3%) were carried out by community nurses with just 4 recorded TUCSV ventings (2.2%). In the Urodynamics clinic 130 catheterisations were performed with 2 recorded ventings of the safety valve (1.5%). There were 47 (6.7%) catheter changes using the TUCSV carried out in a nurse-led day ward with no recorded ventings of the safety valve. No urethral injuries were recorded while using the TUCSV. However, there were 13 recorded cases of urethral injury occurring during catheterisation by doctors where the TUCSV was not used.

Conclusions: Nurses face challenging issues when performing bladder catheterisation especially for patients that are difficult to catheterise and also for patients that are routinely seen in the community for catheter changes. One of these challenges is CBI which is a preventable risk associated with catheterisation associated with longer hospital stay, later urethral stricture, and significant patient morbidity. The TUCSV can potentially prevent and eliminate CBI if widely used in hospitals and also in community settings where there is no immediate medical support available. Implementing the use of TUCSV during catheterisation will promote safer nursing practice in both hospital and in the community. It is a simple yet highly effective solution to this recurring medical error.

Poster No: 5

Self Care Haemodialysis Community Unit

Author: Oonagh Good, Nephrology CNS (pre-dialysis), Mater Misericordiae University Hospital

Renal replacement therapy (RRT) can be self-administered at home by the patient or in hospital/satellite units by healthcare staff. Uptake of self-administered dialysis is low in the Mater Hospital (MMUH), and in Ireland generally. In order to address this, it is proposed to offer a new self-care dialysis option to MMUH patients in the form of Self-Care Haemodialysis based in the community setting (SCHD Community Unit).

A key aspect of the *SláinteCare Implementation Strategy & Action Plan 2021-2023* is the shift of care out of acute hospitals into the community. There are existing options for non-hospital-based dialysis but the barriers can be difficult to overcome, resulting in a high proportion of patients receiving hospital-based haemodialysis (HD). As well as this, the number of chronic kidney disease (CKD) patients requiring RRT is increasing. In Ireland the provision of in-centre HD has grown by 5% since the covid19 pandemic, with existing HD units expanding and new satellite HD units coming on-stream.

A SCHD Community Unit is a way to overcome barriers to self-care therapies and to sustain dialysis patient growth in line with SláinteCare. It would ease the burden on the acute hospital system, save costs and improve patient outcomes.

Poster No: 6

Ultrasound guided arteriovenous fistula cannulation

Author: Ginsha George

Background

Arteriovenous fistula (AVF) is considered as the preferred route of vascular access for haemodialysis. Evidence says that the use of AVF and arteriovenous grafts (AVG) for haemodialysis has several benefits over central venous catheters (CVC) which include better patient survival rates, lesser hospitalisations, lesser rates of infections and lower rates of technique failures. AVF is the gold standard in haemodialysis vascular access and over CVC and AVG, it has less chances of thrombosis, loss of access patency and distal ischaemia. On an average, a patient on chronic haemodialysis gets their fistula cannulated over 312 times in a year. Therefore, correct cannulation technique is a prerequisite for the longer survival rates of a fistula. Although fistula cannulation is important, skilled nurses are an essential part of successful high quality haemodialysis sessions. Several complications of cannulation identified include hematoma, pseudoaneurysms, patient discomfort and even loss of access. Successful cannulation can also affect the dialysis adequacy and few studies have analysed the relationship. The current methods of cannulation techniques haven't changed much in the last number of years, and it is mainly depended on tactile sensation and sometimes photographic images, tattooing or skin markings are also being employed to aid cannulators. But all these techniques lack real time data. Ultrasound guided cannulation is a solution to this problem, and it has been recognised as the best practice for cannulating veins and arteries over physical examination but the data regarding cannulation of dialysis access under ultrasound guidance is minimal. The popularity of using ultrasound for cannulating AVF or AVG is increasing as it has already proven to be the standard of care in other nephrology practices like insertion of central venous catheter over the blind method. With the creation of more and more fistulas and increasing age of the population will lead to a greater number of difficult first-time cannulations. Due to the heavy workload and time constraints on dialysis nurses, it's not feasible to cannulate every fistula under ultrasound guidance but it can assist in so called 'difficult cannulations', early use of AVF, cannulation of fistula where first time success is critical, fistulas with history of multiple attempts and people with deeper veins like in obese patients.

Aims

This poster aims to serve as an educational resource for nurses working in the dialysis unit to assist them in performing real time ultrasound guided cannulation of arteriovenous fistula using two main approaches: transverse or longitudinal approach.

Methods

The poster explains the two main approaches used for cannulation under ultrasound guidance namely the longitudinal and transverse approach. It also depicts the few terminologies and technical considerations while using an ultrasound device.

Conclusion

Ultrasound guided cannulation can an effective method in continuing effective dialysis therapy for some patients but future research and accumulating of further reports is needed to acknowledge this method as the standard to cope with difficult fistulas. It has been suggested by several studies that it is safer and more accurate than blind cannulations even though it takes longer to achieve.

Poster No: 7

Haemodialysis Patient Satisfaction Survey on the use of Cath Dry Shower and swim dressing

Author: Brenda Lindsay

Dialysis access in the form of arteriovenous fistula (AVF) confers superior benefits over central venous catheters (CVC). A recent national cohort study by Hussein *et al.* (2021) demonstrates that the predominant access used in Irish haemodialysis centres is a CVC with 77% of the dialysis cohort with a permanent tunnelled CVC in situ.

Historically, emphasis has been placed on minimising the infection risk within the haemodialysis population with a CVC. Patients have been advised not to shower or swim with tunnelled catheters until exit sites are well healed. Patients are taught to bathe using a handheld shower technique once exit site is healed which may rely on controlling the directional flow from the shower head to avoid wetting the exit site and CVC dressing which can be difficult for patients with dexterity problems.

Patients will continue to shower to maintain personal hygiene. Anecdotal evidence shows that patients will use household items such as plastic sandwich bags, stoma care bags, tinfoil or purchase a shower hood to cover their exit site dressing and catheter which does not offer protection against wet exit site and dressings.

Cath Dry™ is a water-resistant, sterile and hypo allergic CVC dressing which acts as a barrier to external containments suitable for showering freely and swimming for up to 20 minutes (Cath Dry™ 2015). The Cath Dry ™ shower dressing was designed by Dr Pascal Dabel Nephrologist in the United States especially for dialysis patients with long term tunnelled CVC and peritoneal dialysis patients with Tenckhoff catheters.

A patient satisfaction survey was completed since the Cath Dry ™ shower and swim dressing was introduced to the Mater Dialysis Unit in 2019. 21 patients were invited to complete the survey, 20 patients responded.

Fig 1. cathdry.com

Fig 2. cathdry.direct

Results:

1. 85% of patients had their dialysis catheter for > 6 months
2. 20% of patients reported an exit site infection requiring antibiotic treatment
3. 80% of patients shower with their Haemodialysis catheter in situ.
4. 95% of participants surveyed found the showering activity too difficult
5. 30% of participants had resumed water based activities since using Cath Dry™

For those patients who showered with their HD catheter prior to using the Cath Dry™, 95% of respondents found it to be "very awkward, time-consuming and still did not feel very clean". They also have devised ways to protect the catheter and exit site by using "towels", "plaster", and "plastic materials". When asked what they liked most about the Cath Dry™ dressing, most answered that "feeling normal", "convenient to shower", "having freedom and comfort", "stress-free", and being able to do water-based activities are the things they liked about the dressing. Some of the patients' narratives: "it made me feel human again. "I am really happy, before using it I felt miserable" and that "they are a gift from heaven. "After three years of feeling unclean, finally being able to have a proper shower." The introduction of the Cath Dry™ shower and swim dressing has given dialysis patients the freedom and confidence to shower freely with 95% of participants reporting that it improved their showering experience and 85% of patients recommending the dressing to a fellow patient.

Poster No: 8

The Pros and Cons of TRUS Biopsy: a condition review

Author: Michael Solamo

Background Prostate Cancer is the abnormal proliferation of cells within the prostate gland. Globally Prostate cancer is the second most common diagnosed cancer in men and fourth most dominant cancer overall.

Diagnosing prostate cancer requires three diagnostic tests; these include a prostate specific antigen, digital rectal examination and prostate biopsy. Among the three, prostate biopsy is the most invasive yet the most sensitive and specific in confirming a diagnosis of prostate cancer.

Transrectal ultrasound-guided biopsy (TRUS biopsy) has been the gold standard diagnostic test for cancer since 1989. This technique involves collecting tissue samples from the middle, apical and far lateral aspects of the prostate. Despite its undeniable boon intent and far reaching significance, it has bane aftermaths like sepsis and sampling errors.

Infection is a common complication after TRUS biopsy; it is seen in varied presentation, from minor complications to major adverse reactions such as sepsis and septic shock. Increases in the rates of sepsis post TRUS biopsy have been identified over the last ten years. This leads to poor outcomes for patients along with rising healthcare costs.

Sampling errors have also been detected as a downside to using the TRUS biopsy technique with a 2019 study identifying that the procedure carries a 15 % -46% false negative rates. Thus a negative biopsy result does not necessarily dignify that a patient is cancer free. If a patient has clinical manifestations of prostate cancer and acquires a negative biopsy result, they will need to undergo a second biopsy after some time.

Aim The purpose of this poster is to educate health care workers about TRUS Biopsy and also to provide information to patients who will undergo the procedure.

Ultimately the goal is for this poster to be posted in urology areas in the hospital and inspire self-directed learning amongst Urology nurses.

Discussion The poster includes brief and concise explanations about the overview of prostate cancer, definition and indication of TRUS biopsy, its operating procedure in Beaumont Hospital, red flags associated with the practice, TRUS Biopsy Sepsis, and other possible biopsy modalities.

Conclusion TRUS biopsy is indicated as the gold standard for detecting prostate cancer. The rationale for this is that TRUS biopsy is cost effective and not time consuming.

Although branded as the cornerstone, TRUS biopsy has several limitations. Most notable being sepsis and poor cancer detection. To combat sepsis, antibiotic prophylaxis has been recommended by urologists globally.

With regards to poor cancer detection, modifications to the technique have been emerging. These modifications include transperineal mapping biopsy and MRI TRUS fusion biopsy.