

Reflecting on vascular access group projects over the past year

As interest in vascular access for dialysis patients continues to grow, a dedicated team of kidney care professionals has been working hard to pursue a range of projects, from the creation of clinical guidelines to quality improvement in cannulation. Alayne Gagen, Margaret Aitken, Catherine Fielding, Mick Kumwenda and Suzanne Glover provide updates on completed and ongoing initiatives.

■ renal dialysis ■ vascular access ■ quality improvement ■ patient safety

The British Renal Society Vascular Access Special Interest Group (BRS VA SIG) and Vascular Access Society of Britain and Ireland (VASBI) had a busy 2017. The lead author of this article (Alayne Gagen) was appointed co-chair for BRS VA SIG and collaborative support was received from the

Kidney Quality Improvement Partnership (KQuIP). BRS VA SIG also had two very successful conferences and organised monthly conference calls to ensure that all the renal vascular access projects that are under way have gathered momentum and are nearing completion, with the hope that this will start to happen in the early summer of 2018.

Renal vascular access is emerging as a hot topic and there is increasing interest in this important area of practice. This is fuelling the prospect that completion of the work taking place will lead to further projects aimed at improving the varying aspects of both kidney care and renal vascular access.

Projects

Clinical practice recommendations
 BRS VA SIG and VASBI have continued to work on their recommendations for cannulation of the arteriovenous fistula (AVF) and arteriovenous graft (AVG). Originally, the recommendations aimed to be evidence-based; however, the literature on cannulation practice is of poor quality, with little research. As the majority of what is expressed as 'fact' is purely based on expert opinion, the recommendations have used consensus of expert opinion to form the recommendations, referring to relevant research where it is available.

In the last 12 months, 16 nurses from 14 units, including two paediatric units, have been exploring what is best practice in AVF/AVG needling. This work has formed the BRS VA SIG and VASBI recommendations, which will be released in June 2018 (*Box 1*). These will incorporate the existing *Clinical Practice*

Recommendations on Buttonhole Technique (BRS VA SIG, 2016).

Managing Access by Generating Improvement in Cannulation

Managing Access by Generating Improvement in Cannulation (MAGIC) is a joint VASBI and BRS VA SIG quality improvement project supported by KQuIP. It aims to improve needling of AVF and AVG using the BRS and VASBI needling recommendations as a basis to define best practice. Improving needling practice will preserve AVF/AVG function for longer and improve needling experience, ensuring AVF/AVG is a more attractive vascular access option to patients. The committee is developing materials to support this, including educational resources for staff and awareness materials for patients.

Life-threatening bleed

A life-threatening bleed (LTB) subgroup of BRS VA SIG was set up to raise awareness of the risk of a spontaneous bleed from an AVF or AVG. This risk is often overlooked as a potential complication of AVF/AVG use. The group recognised that these bleeds can be catastrophic and so focused on tools which raised awareness of risk factors for LTB, and educated patients and health professionals, with the aim of preventing their occurrence.

As a result of the work done by the LTB subgroup, the BRS circulated recommendations for managing life-threatening haemorrhage (BRS, 2016). The group has also developed an information leaflet for patients on care of AVF, which includes advice on identifying causes for concern and knowing actions to take if a

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Box 1. Sections of the British Renal Society Vascular Access Special Interest Group and Vascular Access Society of Britain and Ireland clinical practice recommendations on needling of arteriovenous fistulae and grafts

- Definitions of buttonhole, rope ladder and area puncture techniques (British Renal Society Vascular Access Special Interest Group and Vascular Access Society of Britain and Ireland, 2016)
- How to choose the correct needling technique
- How to assess the arteriovenous fistula (AVF) or arteriovenous graft (AVG) before needling
- What are good needling sites?
- What is a good needling technique?
- How to manage anxiety related to needling
- How to use nurse-led ultrasound assessment to support needling
- How to perform rope ladder
- How to perform buttonhole, including how to form the track
- How to avoid area puncture and what to do if this is the only option for needling
- What training do staff need to support good needling practice?
- How to involve patients in the care of their AVF/AVG

bleed occurs. A 'look, listen, feel' tool has been developed to aid staff in assessing access before dialysis, which includes identification of risk factors for a bleed.

A recent coroner's report (Northamptonshire, 2017) identified the need for education about bleeds from AVF/AVG to be available for primary responders. With this in mind, the group has developed a poster for A&E departments and ambulance services, as well as a wallet-sized patient card giving patients advice on care of their AVF/AVG and advice on action if a bleed occurs. The development of these tools has been supported by NHS Improvement, the Renal Association (RA), the BRS Patient Safety team, and VASBI, and they are all now ready to undergo final approval by the BRS before being made available online for units to download.

The group has also developed a questionnaire to identify the knowledge of junior medical staff on the action to take if presented with a fistula which is bleeding or at risk of a bleed, and this will be followed by the production of staff education tools.

National survey for the provision of vascular access services for haemodialysis in the UK

Variation in the provision of definitive dialysis access in the UK is well recognised. The results of a multisite dialysis access audit in England, Northern Ireland

and Wales in 2015 were published in the 19th annual UK Renal Registry report, which demonstrated shortfalls in achieving RA audit standards (Hole et al, 2017). A total of 17 (32%) centres who returned data achieved the RA audit target of 80% for definitive access (AVF/AVG/PD) use in prevalent patients with end-stage kidney disease on dialysis. Overall, 10 (18.8%) centres achieved the target of 60% of incident patients dialysing via definitive access.

The BRS VA SIG conducted a national survey to explore reasons for the variation in the provision of in definitive access. The results demonstrated that the infrastructure for the provision of dialysis access was in place, which was facilitated through strong leadership and a well coordinated, accessible care pathway. Together with a cohort of patients who were well informed regarding the advantages of good vascular access, these were found to be the key drivers of success.

BRS VA SIG's survey highlighted that the numbers of vascular access nurses was low, limiting opportunities for them to drive the organisation of successful access care pathways and facilitate adherence to national dialysis access guidelines.

There were concerns raised by respondents of the survey about lack of beds for access surgery and insufficient numbers of interventional radiologists. In some areas, there was also poor input

to multidisciplinary team meetings by nephrologists.

Overall, the survey identified a strong enthusiasm in the UK to provide quality services to improve the provision of definite access for dialysis patients.

Conclusion

The completion of the BRS VA SIG MAGIC project has the potential to improve the longevity of a patient's life, and this will hopefully continue through meeting the educational needs of nursing staff with evidence-based practice policies, nationally implemented guidelines, and a robust, compact e-learning package. The introduction of the LTB project will give emergency services the skills to deal with these events in a timely fashion, as well as enable nursing staff to recognise potential problems at an earlier stage and prevent harm to patients with this type of access. The results of the BRS VA SIG survey have certainly invoked improvements necessary in the vascular access services provided by trusts, and this should lead to a better patient experience, improved patient safety and a higher standard of patient care. **JKC**

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