

Patient characteristics and outcome of haemodialysis vascular access patency - A single centre experience

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OBJECTIVES

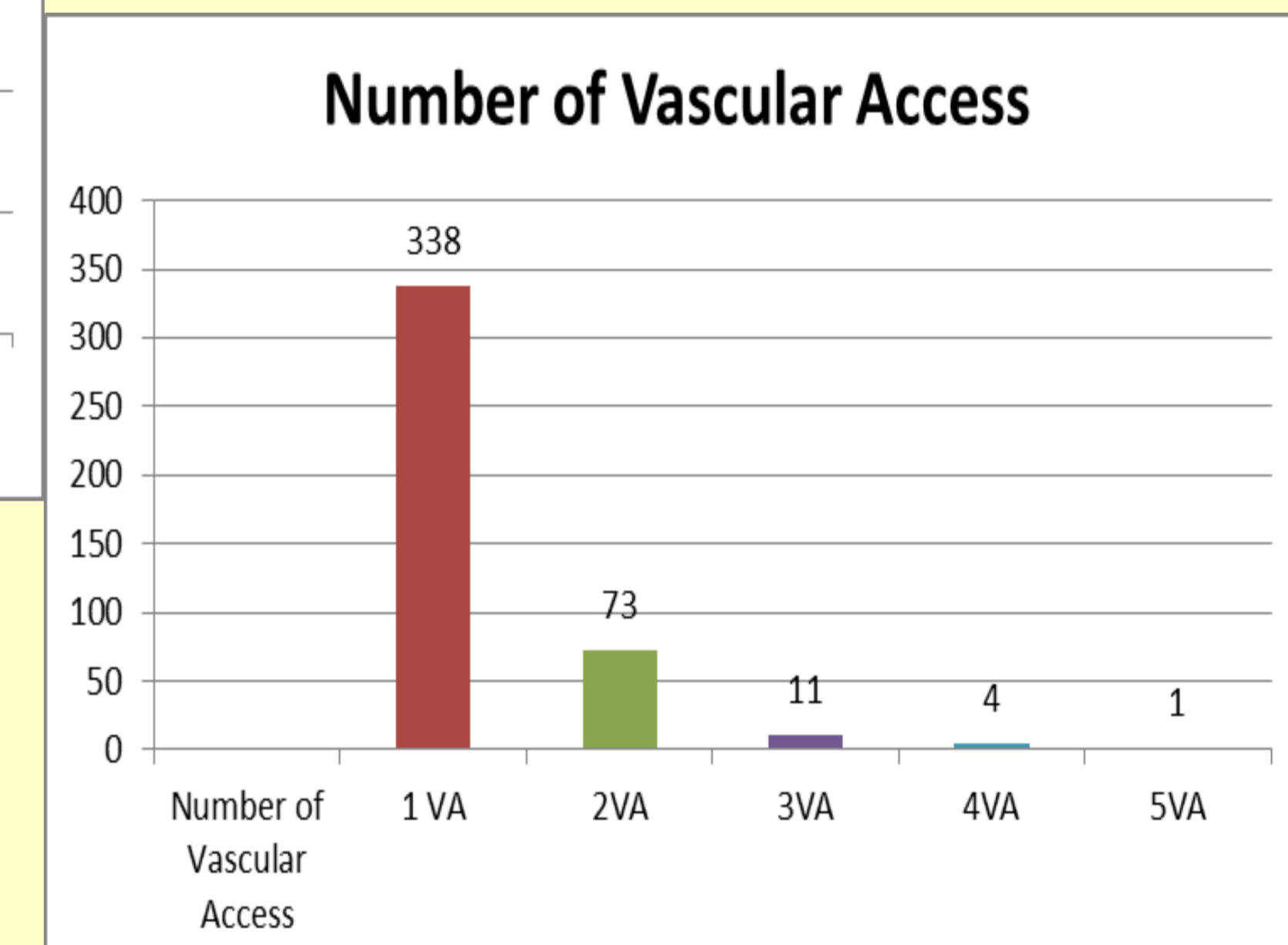
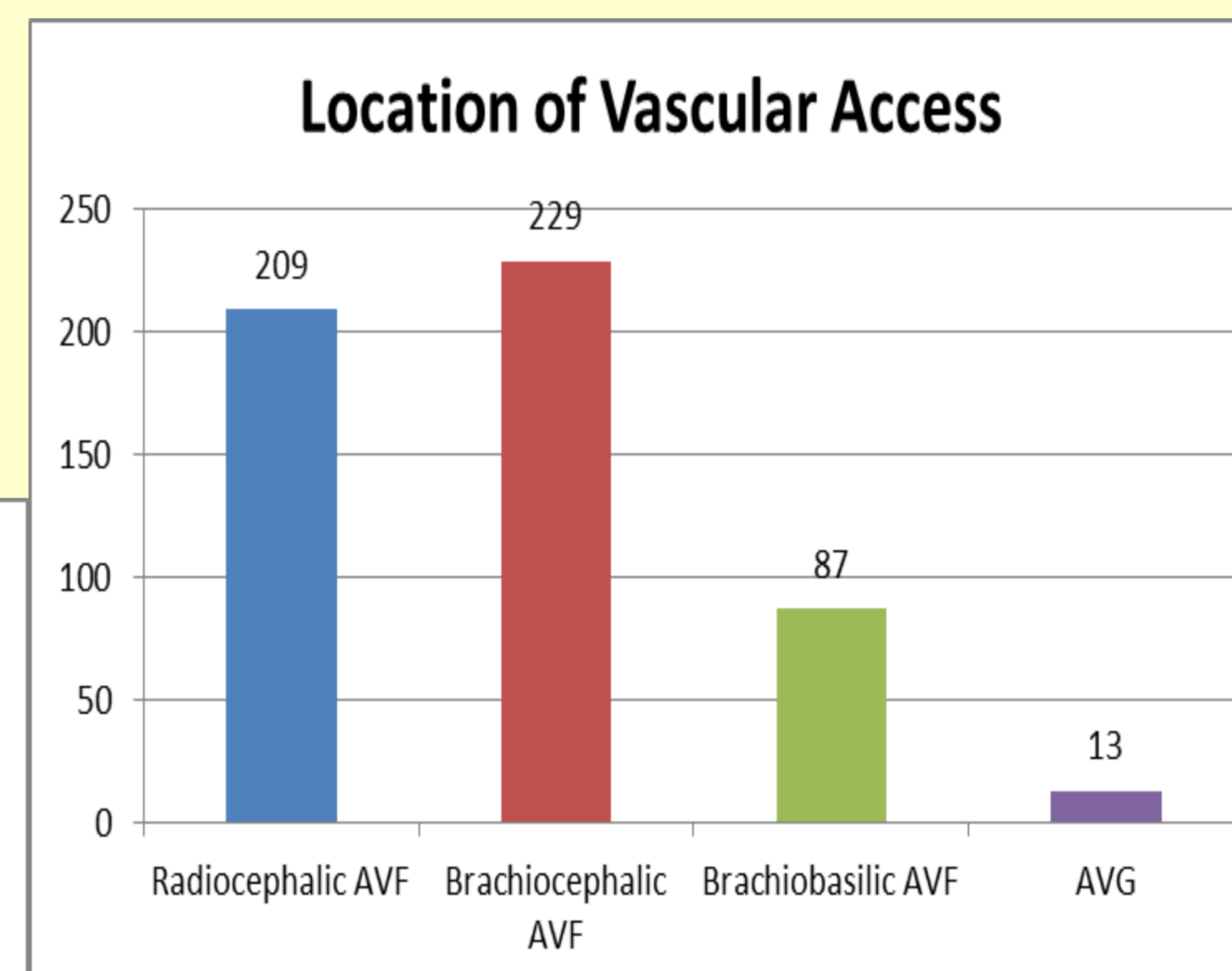
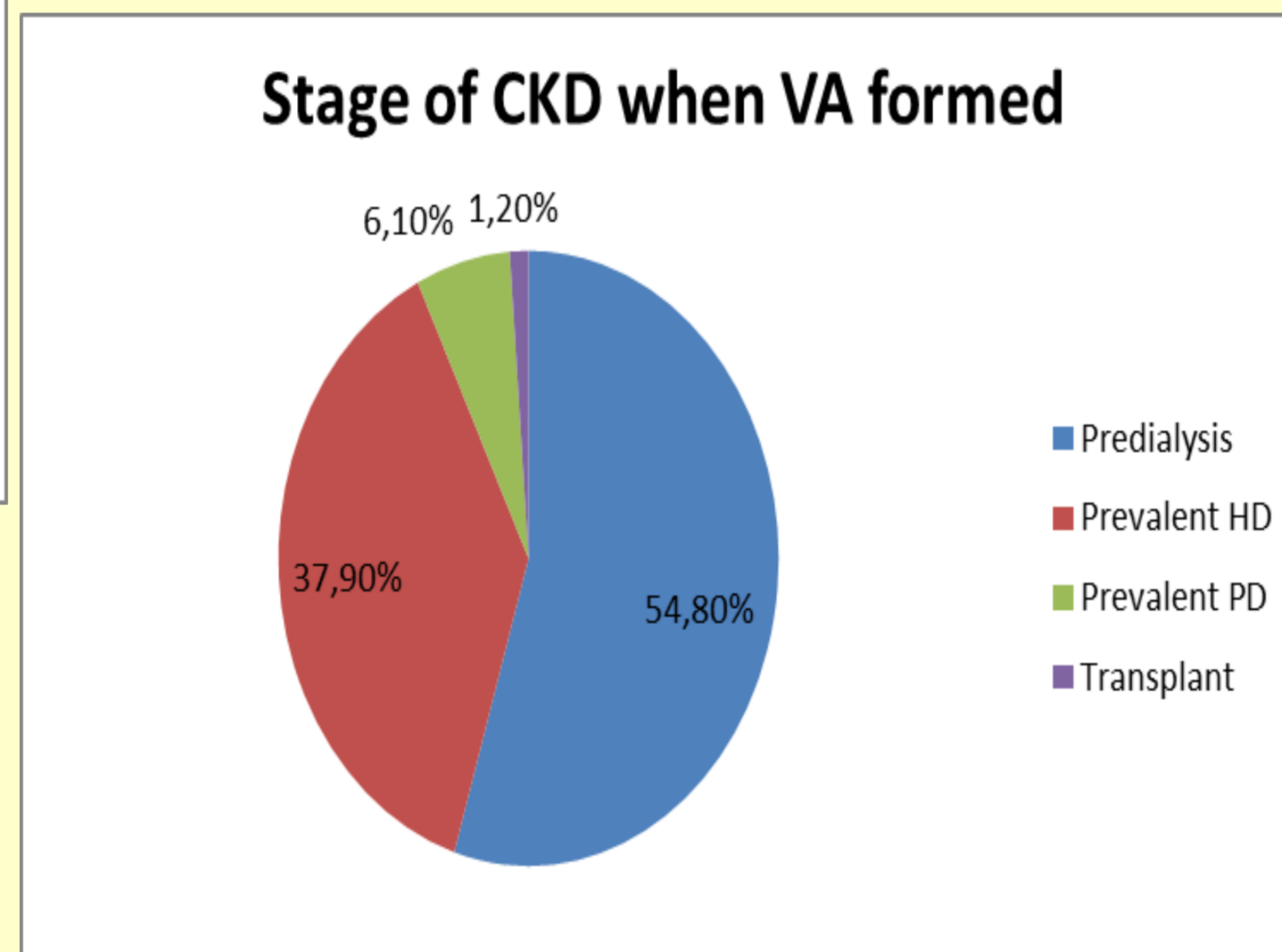
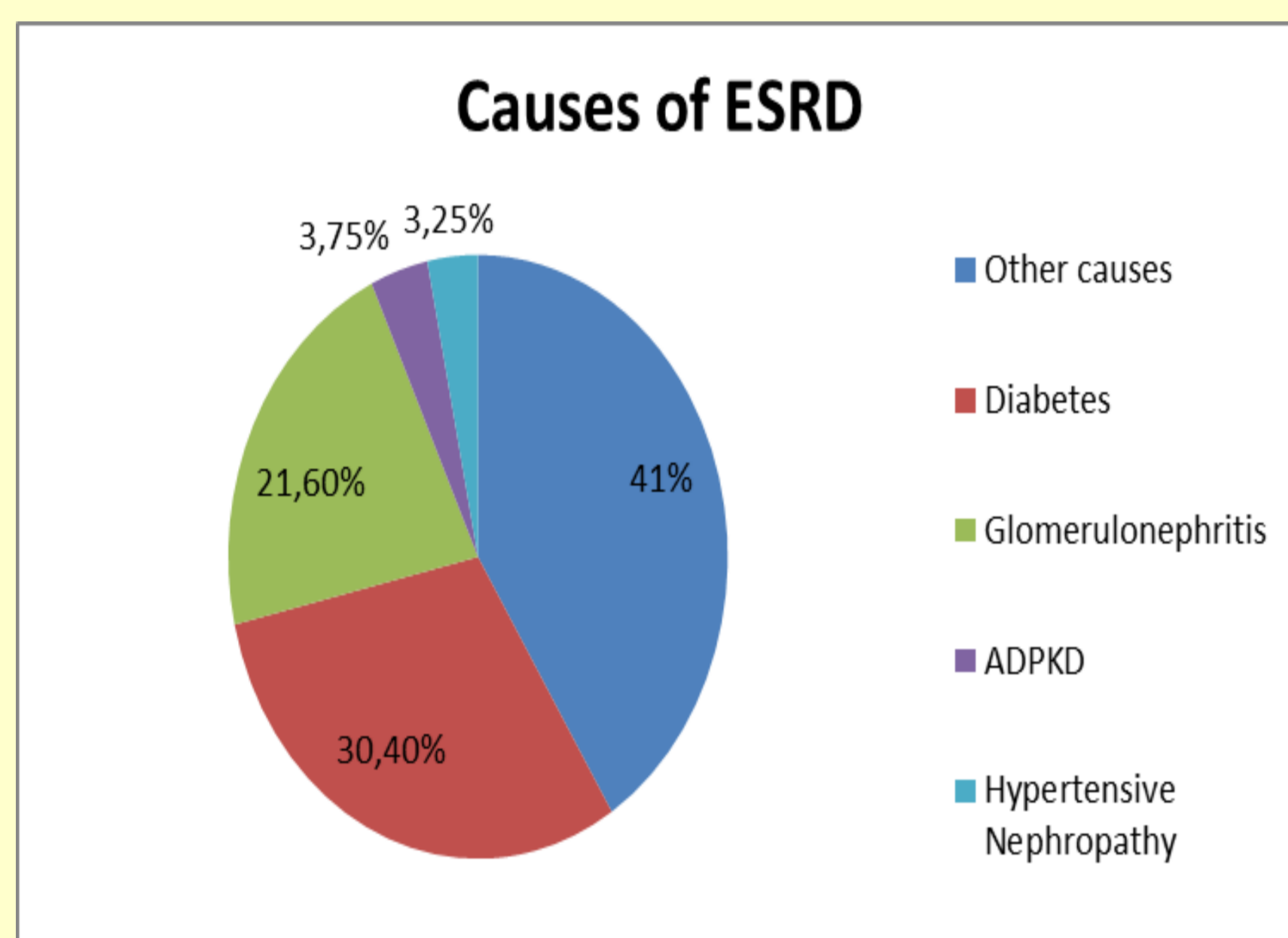
Arteriovenous fistulae (AVF) and Arteriovenous grafts (AVGs) are a key part for delivering an optimised haemodialysis (HD) treatment to renal patients. Eventually, these vascular accesses (VAs) will experience a progressive deterioration in their function, requiring endovascular or surgical intervention. In this study, we aim to identify factors that could influence the functioning of VAs.

METHODS

We retrospectively identified patients who underwent VA formation at the Royal Derby Hospital from October 2009 to December 2015. Their demographic characteristics, comorbidities, background renal disease and medications were collated from our renal database. We analysed the association between age, sex and comorbidities (diabetes and hypertension). In addition, we identified the anatomical location of the AVF, referral to Vascular Access Clinic, first time of angioplasty (surgical or endovascular), number of angioplasties and date of failure.

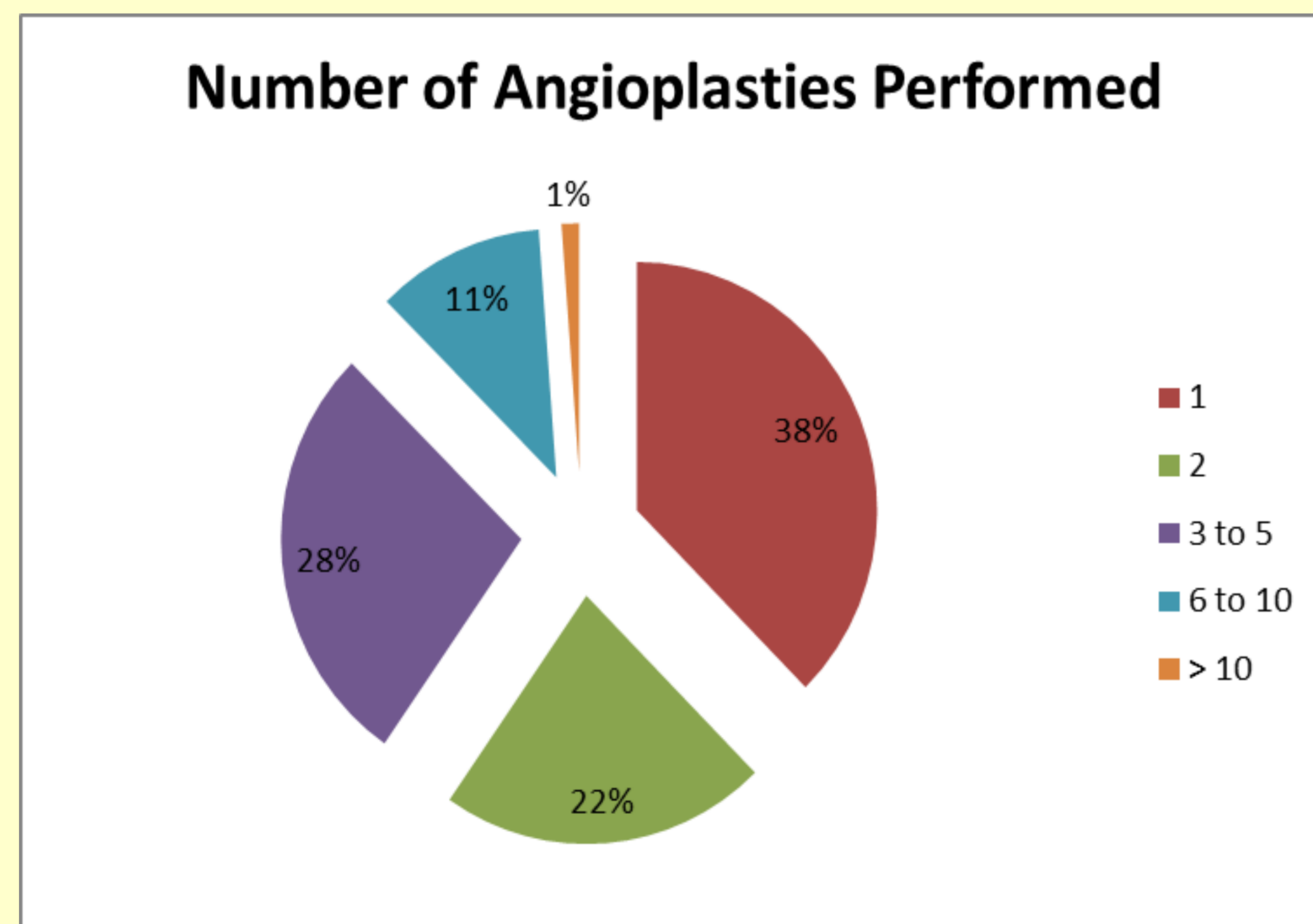
RESULTS

427 pts. (260 M and 167 F) underwent VA formation. The mean age was 63 yrs. 168 patients had DM (39.3%) and 247 had HTN.

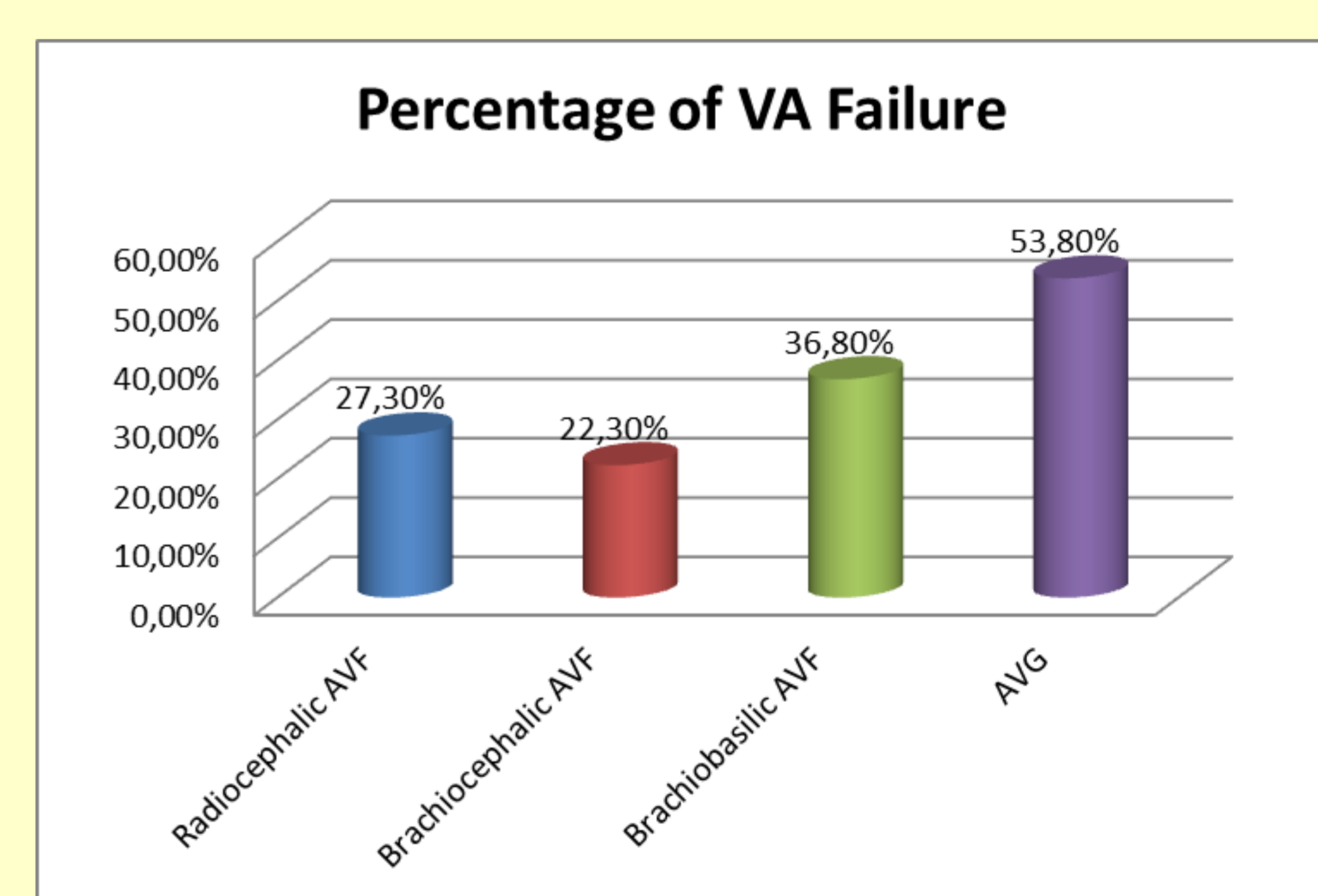


538 VA's were formed. 203 patients (47.54%) were seen in the Vascular Access clinic and had US Doppler done pre-operatively while the remainder had US Doppler done intra-operatively. 455 VAs were usable for dialysis, giving a primary failure rate of 15.4%; 38 (7.1%) of which had to be revised. Patency rates at 6 and 12 months were 80.1% and 48.3% respectively.

- 276 VAs required angioplasty (51.3%)
- Median time to angioplasty: 379 days.



- 147 VAs eventually failed (27.3%)
- Median time to failure : 318 days.



We found no correlation between age, having diabetes or not being seen in the Vascular Access clinic contributing to VA failure. Being male, having hypertension, the type of VA and having a previous angioplasty was associated with higher rates of VA failure; (p values 0.014, 0.008, 0.032 and 0.001 respectively).

Interestingly having a revision of a VA was not associated with higher rates of failure; (p value 0.744).

CONCLUSIONS

Formation of VAs for HD access remains the access of choice and is associated with high patency rates. However, good blood pressure control and choice of location for VA remains paramount to prolonging VA patency and their good function.



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