

Abstract**Outcomes of Arteriovenous Fistula Formation in an Octogenarian Population**Leong BDK¹, Huang YY¹, Vijayan V¹, Mwipatayi P¹, Hockley J¹, Sandford M²¹Department of Vascular Surgery, Royal Perth Hospital²Department of Nephrology, Royal Perth Hospital**Introduction:**

A significant number of patients over the age of 80 are being commenced on haemodialysis. The aim of our study was to analyse the outcome of arteriovenous fistula (AVF) formation in this group of patients.

Method:

A retrospective analysis was performed from a prospectively collected Renal Access Database between 2008 and 2011. Outcome measures included AVF usage, patency rates, reintervention and factors associated with failure to use the AVF.

Results:

530 patients underwent AVF creation over the study period. 31 patients were over the age of 80. 70.9% of the octogenarian patients eventually progressed to haemodialysis but only 25.8% of AVFs created were utilised. The mortality rate 1-year post AVF formation was 9.7%. The overall primary and secondary patency rates at 1 year were 32.3% and 45.2% respectively. Factors associated with early failure were diabetes ($p=0.002$), pre-operative anaemia ($p=0.014$), chronic lung disease ($p=0.004$) and low pre-operative creatinine ($p<0.0001$). Primary and secondary patency rates were higher in the group whose AVF was utilised compared to the group which did not use their AVF (37.5% vs 30.4% and 62.5% vs 39.1% respectively). The overall reintervention rate was higher in the unused AVF group compared with the group whose AVF was utilised (39.1% vs 25%).

Discussion and Conclusion:

Given the ultimate lower usage rate of the AVF and higher intervention rate within 12 months of creation, AVF formation in octogenarian patients may not be appropriate. Patient selection is vital and alternative renal access should be considered especially for those patients with risk factors associated with failure.