

PREDICTORS OF ARTERIOVENOUS FISTULA MATURATION FROM THE STANDPOINT OF A NEPHROLOGIST. A RETROSPECTIVE ANALYSIS

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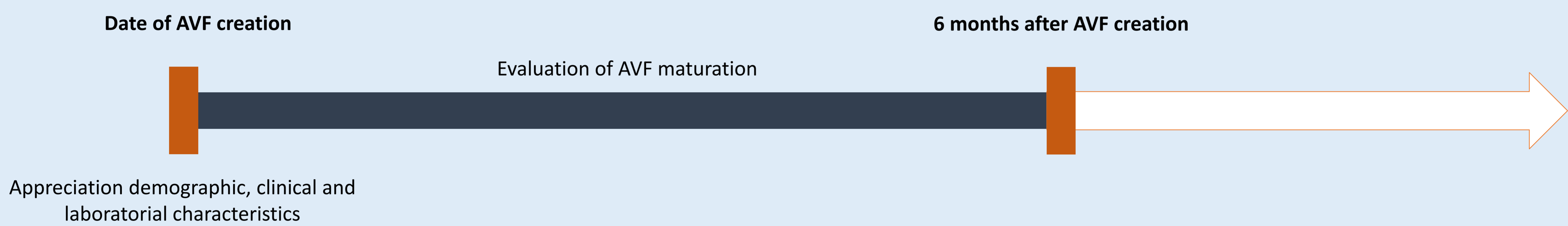


INTRODUCTION AND AIM

- ≡ A timely arteriovenous fistula (AVF) is a major step in the management of pre-dialysis patients.
- ≡ To reduce morbidity, mortality and significantly improve their survival rate these patients should undergo hemodialysis (HD) using autogenous AVF.
- ≡ The goal was to evaluate how individual comorbidities influence vascular access maturation.

METHODS

- ≡ Studied 201 patients undergoing predialysis creation of elbow and wrist AVF between 2012 and 2015 with a follow up of at least 6 months to evaluate their maturation



- ≡ Defined two groups: Group with AVF maturation VS Group without AVF maturation
- ≡ Compared demographic, clinical and laboratorial characteristics between both groups
- ≡ Multivariate logistic regression – Identified predictors related with AVF maturation

RESULTS

| Total N | 201 |
|-----------------------------|-------------|
| Male | 132 (65,7%) |
| Mean age | 70,3 ± 13,8 |
| Age > 65 years | 145 (73,1%) |
| Diabetes | 101 (50,2%) |
| Peripheral vascular disease | 37 (18,4%) |
| Ischemic cardiopathy | 39 (19,4%) |
| Elbow AVF | 126 (62,7%) |
| Wrist AVF | 75 (37,3%) |
| AVF with maturation | 134 (66,7%) |

Characterization of the sample

| Correlation of maturation with: | | |
|---------------------------------|-------|---------|
| | r_s | p |
| Peripheral vascular disease | -0,39 | 0,029 |
| Age > 65 years | -0,49 | 0,001 |
| Diabetes | -0,49 | 0,001 |
| Ischemic cardiopathy | -0,57 | < 0,001 |
| Congestive heart failure | -0,43 | 0,01 |

Spearman correlation

| Predictors of maturation | | | |
|--------------------------|------|-----------|---------|
| | OR | IC | p |
| Age > 65 years | 0,33 | 0,14-0,79 | 0,012 |
| Diabetes | 0,42 | 0,22-0,82 | 0,01 |
| Ischemic cardiopathy | 0,24 | 0,11-0,52 | < 0,001 |

Multivariate logistic regression

| Total N = 201 | Maturation N = 134 | Without maturation N = 67 | p |
|---|--------------------|---------------------------|---------|
| Demographic, clinical and laboratorial characteristics | | | |
| Male | 64,2% | 68,7% | 0,32 |
| Age > 65 years | 65,7% | 88,1% | < 0,001 |
| Mean age | 67,4 ± 14,4 | 79,5 ± 10,2 | 0,001 |
| Diabetes | 41,8% | 67,2% | 0,001 |
| Arterial Hypertension | 84,3% | 85,1% | 0,534 |
| Ischemic Cardiopathy | 10,4% | 37,3% | < 0,001 |
| Peripheral vascular disease | 14,2% | 26,9% | 0,025 |
| Stroke | 11,9% | 20,9% | 0,073 |
| Smoking | 14,9% | 14,9% | 0,577 |
| Congestive heart failure | 15,7% | 31,3% | 0,009 |
| Neoplasm | 13,4% | 14,9% | 0,840 |
| Mean proteinuria(mg) | 2119,9 ± 2185,1 | 2269,7 ± 2571,2 | 0,528 |
| Mean albumin (g/dL) | 3,29 ± 1,1 | 3,5 ± 1,0 | 0,831 |
| Location of vascular access | | | |
| Wrist AVF | 53 (39,6%) | 22 (32,8%) | 0,22 |

Univariate analysis (qui-quadrado e t-student)

CONCLUSIONS

- ≡ From clinical evaluation the predictors of AVF maturation are: Age > 65 years, Diabetes, Ischemic cardiopathy

Multidisciplinary approach

- ≡ However, in medical practice, the evaluation of a vascular access involves more than clinical characteristics, requiring also a crucial and objective surgical assessment, which was not the aim of our work.

