THE EFFECT OF ETHNICITY, SOCIOECONOMIC FACTORS AND COMORBIDITIES ON PRIMARY FAILURE RATE AND SURVIVAL OF SIMPLE ARTERIOVENOUS FISTULAE

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BACKGROUND

This study was performed in the Heart of England Foundation Trust. The catchment population of this hospital is approximately ¼ population of West Midlands (800 000). It is a highly multicultural population and encompasses a large percentage of social deprivation.

OBJECTIVES

To examine the effect of ethnicity, socioeconomic status and comorbidities on primary failure rate and survival of arteriovenous fistulae.

END POINTS:

Primary Failure(PF): Fistula used for less than 6 dialysis sessions

Ateriovenous Fistula Survival (AVF Survival): Time until the fistula was abandoned for a new form of access

METHODS

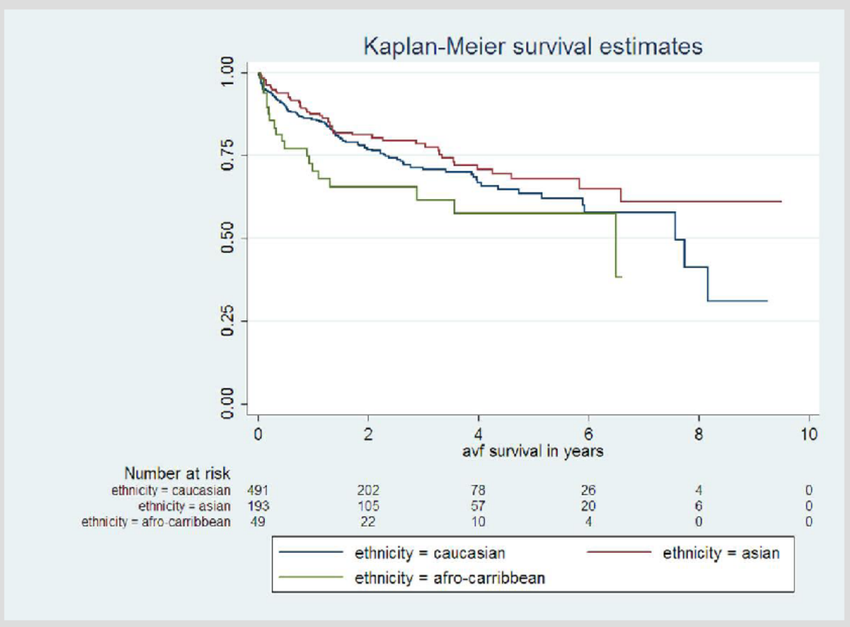
Prospective database of fistula operations used from December 2002 to December 2011.
Retrospective analysis of access operations and dialysis sessions done using electronic patient records and Proton (national renal database).

Deprivation Index (DI) was calculated from postcodes and 2011 census data from Office of National Statistics.
Comorbidities were calculated using Charlson Index.

RESULTS

1002 patients were analysed: 619 (62%) had radiocephalic AVF, 303 (30%) had brachiocephalic AVF and 80 (8%) had brachiobasilic AVF

68% were Caucasian, 25% Asian and 6% Afro-Caribbean. Caucasians were older than Asians and Afro-Caribbeans (p= 0.0001).



Afro-Caribbeans had slightly shorter AVF survival
(logrank test p = 0.07)

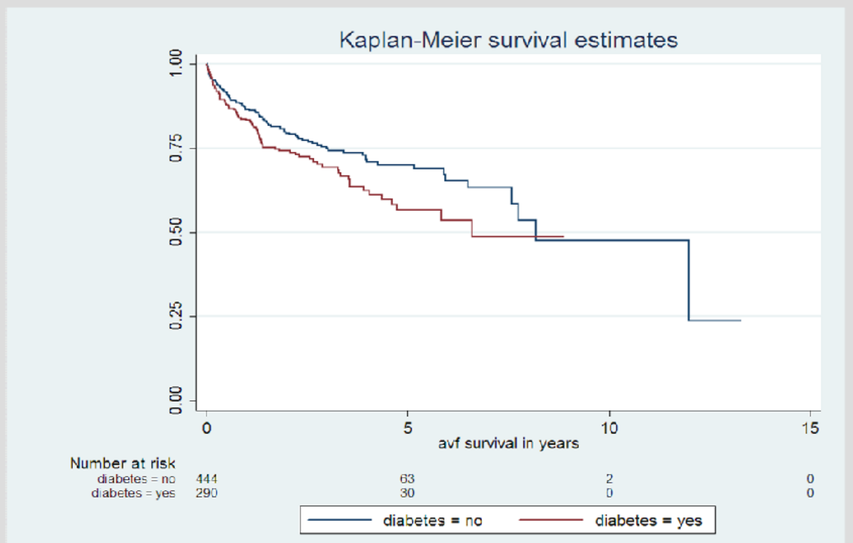
Half (49%) were in the highest DI category and 11% in the lowest.

In 74%, the fistula was used for dialysis, 21% had PF and in 5% the outcome was unknown.

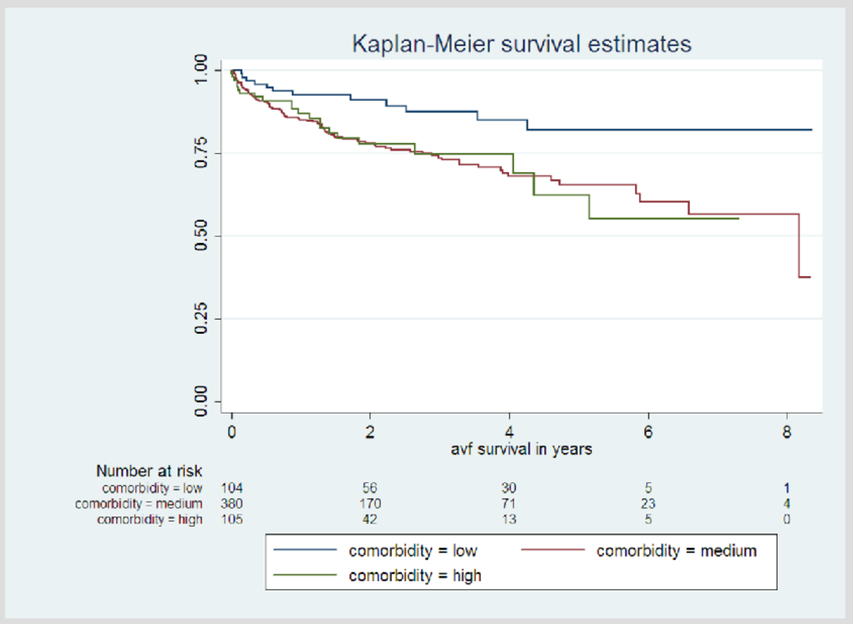
Women had 25% PF compared to 18% for men (p < 0.009).

PF did not differ with ethnicity (p = 0.28), DI (p = 0.81), co-morbidities (p = 0.57) or diabetes (p =0.78).

AVF survival was not significantly different according to gender (logrank test p = 0.33) or DI (logrank test p = 0.87).



Diabetics had a worse AVF survival
(logrank test p = 0.03)



Low comorbid status was associated with better AVF survival
(logrank test p = 0.02)

CONCLUSIONS

- Ethnicity, socioeconomic status and comorbidity had no significant effect on primary failure rate.
- Low comorbid status had a significantly longer AVF survival.
- Afro-Caribbeans had a slightly shorter AVF survival.
- Diabetes was associated with a significantly shorter AVF survival.

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