

Outcomes of arteriovenous fistula creation in patients undergoing hemodialysis: an Indian experience

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Creating an arteriovenous fistula (AVF) to provide a patent and long-term vascular access (VA) for hemodialysis (HD) still remains a challenge. A methodical approach to choosing the appropriate HD access in accordance with patients' end-stage kidney disease (ESKD) life plan will help them achieve their goals safely. This study summarizes the impact of various factors on the AVF outcomes in an Indian population as well as the necessary considerations before choosing the site of AVF creation. This study involved a single-center, retrospective evaluation of all patients who had undergone arteriovenous (AV) access creation for maintenance HD from October 2018 to August 2019 at a tertiary center in India.

Results: In our study of 216 cases, the average age at presentation was 43.9 years and the difference in age between the successful and unsuccessful group was not significant. The successful outcomes in males were significantly higher than those in females ($p=0.005$). The mean venous diameter in the successful group was significantly larger than that in the unsuccessful group. The distal arterial and vein diameter was higher in both males and females of the laborer group compared to the clerical group; however, the outcomes were comparable. The overall complication rate was 22.22%. We had primary patency rates of 83% at the end of one year with a primary failure rate of 8.80%.

Conclusion: Vein diameter was the most important predictive factor for a successful outcome in our study. Factors like age and life expectancy, gender, comorbidities, occupation, and type of anastomosis may not be individually predictive of outcomes but need to be considered before choosing the appropriate site of access creation according to the life plan of the patient. This will reduce morbidity associated with an additional procedure and facilitate the initiation of HD as early as possible. Occupation can be considered as a surrogate for preoperative forearm exercises with the increased caliber of vessels found in people performing heavy/manual labor favoring a more distal AVF creation.

Biography

Dr. Aneesh S. has completed his Master's in Surgery (M.S.) from the prestigious institute of JIPMER. He then finished his three years of training in the field of Plastic and Reconstructive Surgery and is currently working as a consultant at TNMC and BYL Nair Hospital. He has a keen interest in research and has published numerous papers in reputed journals. His field of interest includes microvascular and reconstructive surgery, breast reconstruction, and facial rejuvenation procedures.

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