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COMPUTED TOMOGRAPHY AND ADRENAL VEIN SAMPLING CONCORDANCE RATE IN PATIENTS WITH PRIMARY ALDOSTERONISM: A TERTIARY CENTRE EXPERIENCE

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INTRODUCTION

Primary Aldosteronism (PA) is an important cause of secondary hypertension with increasing incidence worldwide. Subtype classification is essential to determine the mode of treatment. Following an initial computed tomography (CT) imaging, adrenal vein sampling (AVS) is advocated as the next step for subtype classification. We aimed to evaluate the AVS performance in Institut Kanser Negara (IKN)/ Hospital Putrajaya (HPJ) and the diagnostic CT-AVS concordance rate.

METHODOLOGY

This is a retrospective cohort study of patients with primary aldosteronism who underwent AVS at IKN/HPJ between January 2016 and December 2022.

RESULT

A total of 106 patients with biochemically confirmed PA underwent AVS at IKN/HPJ between 2016 and 2022. This cohort had a more severe phenotype of PA with all but 2 patients requiring potassium replacement. One hundred eighteen AVS were performed within this period with a success rate of 70% (N=82). Of the unsuccessful AVS (N=36), 86% (N=31) were due to cannulation failure of the right adrenal vein. Only 1 patient experienced adrenal vein injury following the procedure but this did not result in any morbidity. The overall concordance rate between CT and AVS was 86.1% and appeared to be higher in patients with unilateral adenoma (90%). Without AVS, 6 patients would have been wrongly subjected to unilateral adrenalectomy while 3 patients would have been denied the opportunity for cure. There was no statistically significant difference between patients' age, gender and race with CT-AVS concordance rate.

CONCLUSION

Adrenal vein sampling is a safe procedure with a high success rate when performed at an established centre with an experienced operator. We identified a very high CT-AVS concordance rate for patients with unilateral adenoma and hypokalaemia; however, there still remains a small risk of inaccurate diagnosis without AVS.