CHAPTER 10: PREDONATION BLOOD PRESSURE

Except in the case of Recommendation 10.6, the ERT search parameters did not identify evidence from eligible studies pertinent to the recommendations in chapter 10 and therefore the following recommendations are "Not Graded."

Evaluation

10.1: Blood pressure should be measured before donation on at least 2 occasions by clinical staff trained in accurate measurement technique, using equipment calibrated for accuracy.

10.2: When the presence or absence of hypertension in a donor candidate is indeterminate based on history and clinic measurements (eg, blood pressure is high normal or variable), blood pressure should be further evaluated using ambulatory blood pressure monitoring (ABPM) or repeated using standardized blood pressure measurements.

Selection

10.3: Normal blood pressure, as defined by guidelines for the general population in the country or region where donation is planned, is acceptable for donation.

10.4: Donor candidates with hypertension that can be controlled to systolic blood pressure less than 140 mm Hg and diastolic blood pressure less than 90 mm Hg using 1 or 2 antihypertensive agents, who do not have evidence of target organ damage, may be acceptable for donation. The decision to approve donor candidates with hypertension should be individualized based on demographic and health profile in relation to the transplant program's acceptable risk threshold.

Counseling

10.5: Donor candidates should be counseled on lifestyle interventions to address modifiable risk factors for hypertension and cardiovascular disease, including healthy diet, smoking abstinence, achievement of healthy body weight, and regular exercise according to guidelines for the general population. These measures should be initiated before donation and maintained lifelong.

10.6: We suggest that donor candidates should be informed that blood pressure may rise with aging, and that donation may accelerate a rise in blood pressure and need for antihypertensive treatment over expectations with normal aging. (*2D*)

RATIONALE

Evaluation and Definitions

BP Measurement and Classification

It is important to use an accurate, well-calibrated device and an appropriately sized BP cuff based on arm length and circumference. An overly small cuff will overestimate and an excessively large cuff will underestimate true BP levels. The donor candidate should be seated quietly with back supported, feet on the floor and arm supported at heart level for the measurements. It is advisable to measure BP on at least 2 separate occasions by trained staff, or on one occasion plus ambulatory BP monitoring (ABPM) to minimize anxiety effects in donor candidates.[211] Automated serial BP measurements can also eliminate a "white coat" effect.[212] Multiple prior guidelines and policies for the evaluation and care of living kidney donor candidates recommend assessment of predonation BP on several occasions,[212,213] and/or consideration of ABPM in donor candidates with elevated office readings, receiving antihypertensive therapy, or who are older at evaluation.[38,50,51,196,214,215]

Hypertension is defined by office readings of systolic SBP of 140 mm Hg or greater or diastolic BP (DBP) of 90 mm Hg or greater, out-of-office daytime mean ABPM or home measurements of SBP of 135 mm Hg or greater or DBP of 85 mm Hg or greater,[213] or the need for medication to control BP. Note that some antihypertensive agents may be used for indications other than BP treatment (eg, diuretics for edema or beta-blockers for migraine headache prevention), and that the indication for the prescribed medications should be determined as part of the evaluation.

White coat hypertension is defined as hypertension by office BP measurements with normal out of office measurements by ABPM or home readings. Individuals with white coat hypertension have lower cardiovascular risk than persons with hypertension, but may carry increased risk for future hypertension.[212,216] Population-based studies suggest that 20-25% of adults may have white coat hypertension.[216] Individuals with treated hypertension may also have a "white coat effect," such that elevated BP is recorded in the medical environment even when treated BP is controlled by ABPM or home readings.

Masked hypertension is defined as normal BP by office measurements with hypertension by ABPM or home readings. Like sustained hypertension, masked hypertension is accompanied by increased risk for hypertensive target organ damage, and thus treatment is warranted if identified. Population-based studies suggest that 10-30% of adults may have masked hypertension.[216,217] Masked hypertension cannot be identified in donor candidates in whom BP is measured by office readings alone, but the implications of requiring ABPM or home readings to screen for masked hypertension in donor candidates (eg, outcomes, cost, efficiency) are not defined.

Hypertension Risk Factors and Counseling

Potentially modifiable risk factors for hypertension include use of certain medications (eg, nonsteroidal anti-inflammatory agents, decongestants, stimulants) and presence of certain lifestyle factors (eg, excess alcohol intake, high sodium diet, use of dietary supplements, or smoking).[218-220] Nonmodifiable hypertension risk factors include a family history of hypertension, race, and age. Additional considerations include women with a history of preeclampsia or gestational hypertension. In this setting we suggest predonation counseling on the potential for increased cardiovascular risk and emphasis on healthy behaviors to reduce cardiovascular risk. Risk factors for hypertension by themselves do not constitute contraindications to donation in a normotensive person. Consistent with recommendations for the general population,[221] British Transplantation Society and Renal Association guidelines[48] recommend lifestyle measures in kidney donors to reduce the risk of hypertension and its consequences, including frequent exercise, smoking cessation, and weight loss where appropriate.

Target organ damage may be manifest as prior occurrence of a cardiovascular event such as myocardial infarction or stroke, urine AER greater than 30 mg/d (ACR > 30 mg/g or