Abstract 26

Toward Uncovering Key Factors in Adherence in a Post–Heart Transplant Population: A Project in the Making

Flavio Epstein, PhD, and Parag Kale, MD
Heart Transplant Management Service, Santa Clara, CA

Background: Adherence to immunosuppressant medications is variable among heart transplant recipients with potentially life- threatening outcomes. It is understood that patients with psychosocial barriers are at increased risk of poor outcomes due to a variety of factors, such as stress related to the procedure, medication nonadherence, recidivism of substance abuse, and mental status changes with steroid exposure.

Hypothesis: Specific issues related to depression, anxiety, cognitive dysfunction, and external locus of control have been documented in the literature as likely reasons for nonadherence to prescribed medication regimens in a number of patient populations. Data are lacking for heart transplant recipients, however. Our aim is to understand the impact of these psychologic factors in post–heart transplant recipients' nonadherence to immunosuppressant medication regimens. In particular, we seek to understand the post–heart transplant recipients' locus of control.

Locus of control is a concept from Rotter's social learning theory. Internal locus of control refers to the perception of positive or negative events as being a consequence of one's own actions and thereby under one's own personal control. External locus of control refers to the perception of positive or negative events as being unrelated to one's own behavior and therefore beyond personal control. The literature suggests that patients with an internal locus of control have a sense of responsibility for their health and therefore do better in terms of adherence. Thus, knowledge of the locus of control of heart transplant recipients would be key to predicting adherence with immunosuppressant medication and follow up care.

Method: In an effort to understand the profile of adherence we began collecting data on post-transplant recipients. Recruitment was conducted by contacting all the post-transplant patients followed by the Kaiser Permanente Northern California transplant service and asking for voluntary participation. Data collection consisted of self-report questionnaires and one cognitive screening test conducted by the transplant psychologist. To date, we have collected data on 24 participants; it is hoped that data will be available for 46 participants. This number will adequately power the study and allow meaningful statistical interpretation of data.

Data Summary: Averages for 24 patients:

Demographic: male, 79%; female, 21%; age, 61.12 years; years post-heart transplant, 4.35.

Psychologic: coping (self-report 0–10), 7.73; adherence to immunosuppressant medication (0–12),11.16 (high); depression (Beck Depression Inventory-II: 0–13 minimal), 6.47 (low); state anxiety at appointment (cardiac: 25.81–48.71 = normal), 28.66 (average); trait anxiety in general (cardiac: 25.64–43.50 = normal), 28.87 (average); cognitive assessment (Montreal Cognitive Assessment): normal = 26–30), 26.54 (low normal).

Locus of control: internal (6–36), 23.21 (above average); chance (6–36), 15.37; doctor (3–18), 16.3 (high); other people (3–18), 10.3.

Limitations: The study is limited in terms of accuracy by patient self-reporting.

Results: Preliminary data on 24 patients included self-reported high adherence. This suggests a profile of patients who cope relatively well, have minimal depression and average state and trait anxiety, and whose cognitive function is in the normal range. The locus of control data suggests that both internal and external (doctor-specific) orientations are meaningful to our understanding of adherence.

Discussion: Additional data and recruitment of more patients will validate the findings of this preliminary analysis. It is hoped that locus of control may yield a better predictive profile of adherence compared with traditional identification with mood disorders. Our clinical experience suggests that patients will be more truthful with the questionnaire about locus of control because this concept is less loaded for them. The concepts of depression and anxiety are negatively perceived by patients, which may cause them to be more guarded in the ways they answer those questions. Therefore this subset of data might yield more meaningful results. In addition to collecting the data summarized above, we will check each patient's chart to verify episodes of rejection and potential nonadherence.

Future Directions: Objective data on patient adherence will be collected and potential nonadherence will be correlated with future rejections. This data collection phase is under way.