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## Arrhythmias in Hospitalized Heart Transplanted Patients: A United States National Study

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# Arrhythmias in Hospitalized Heart Transplanted Patients: A United States National Study

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## Background

- Abnormal anatomy, sympathetic denervation, rejection, infection, and immunosuppressive drugs may increase the risk for arrhythmias in heart transplanted (HT) patients.
- Data are limited regarding arrhythmias in hospitalized HT patients.

## Objective

- To identify various arrhythmias identified and documented in hospitalized HT patients using a large US national database.

## Methods

- Nationwide Inpatient Sample databases from 2003 through 2012 were queried for hospitalizations in HT recipient patients  $\geq 18$  years of age using ICD9 code V42.1
- Hospitalizations with a primary or secondary discharge diagnosis of acute myocardial infarction were excluded.
- Individual arrhythmias and associated discharge diagnoses were then identified using appropriate ICD-9 and CCS codes.

## Results

- Of the 132,552 hospitalizations in HT patients, a **diagnosis of arrhythmia was present in 17,693 (13.3%)**.
- Atrial arrhythmias (7.8%) were substantially more common** than ventricular arrhythmias (1.0%). **Atrial fibrillation (AF) (6.0%) was the most common arrhythmia** followed by atrial flutter (1.8%; Figure 1A).

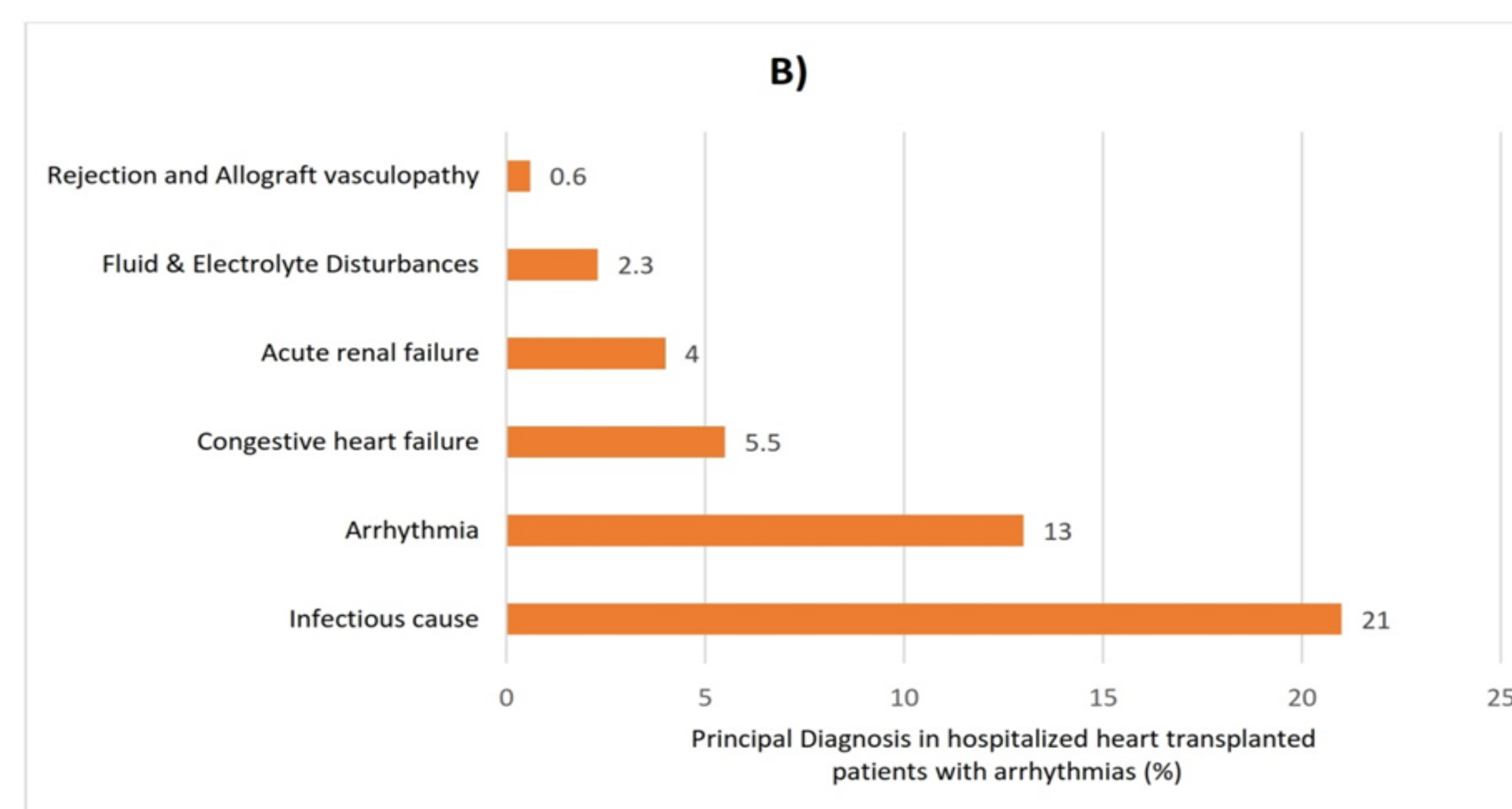
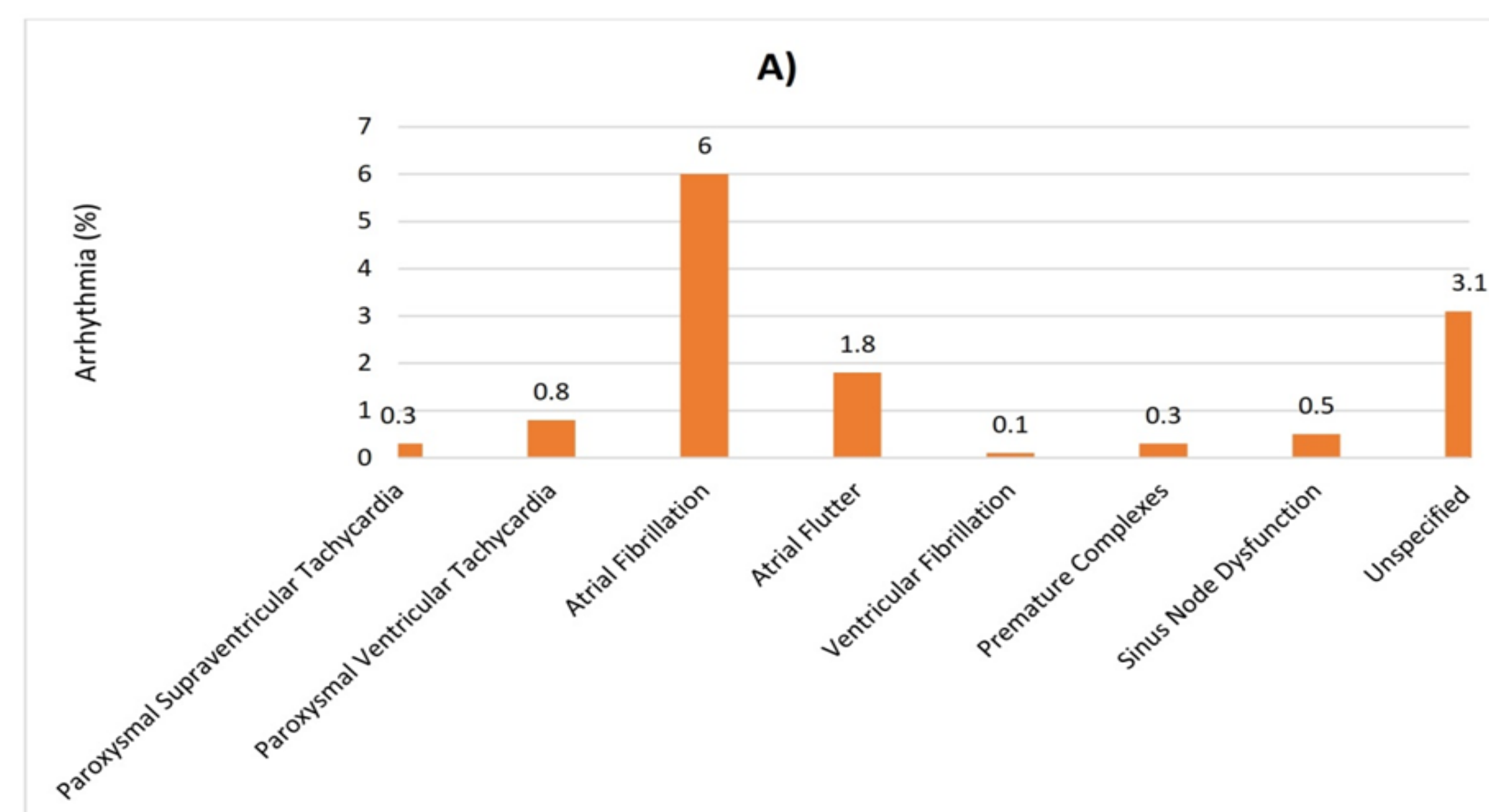


Figure 1. A) Various arrhythmias in hospitalized heart transplanted patients; B) Principal diagnosis for hospitalization in heart transplanted patients with arrhythmias.

## Results

- Among hospitalizations in which an arrhythmia was present in a HT patient, the **primary discharge diagnosis was more likely to be an infectious disease (21%)**, rather than the arrhythmia (13%) or congestive heart failure (5.5%; Figure 1B).
- In patients primarily admitted with complications of the transplanted heart including rejection and allograft vasculopathy (n=443), 24.7% had a diagnosis of an arrhythmia, with almost half having AF (11%).

## Conclusion

- Arrhythmias are common in hospitalized HT patients, with AF being the most common. In this patient population, arrhythmias may often represent a consequence of HT-related complications such as infection or rejection.
- Given the anatomical and functional alterations of the transplanted heart, studies are needed to better understand and manage these arrhythmias.

## Disclosures

- None of the authors have any relevant disclosures.

