**MAIN FIGURES**

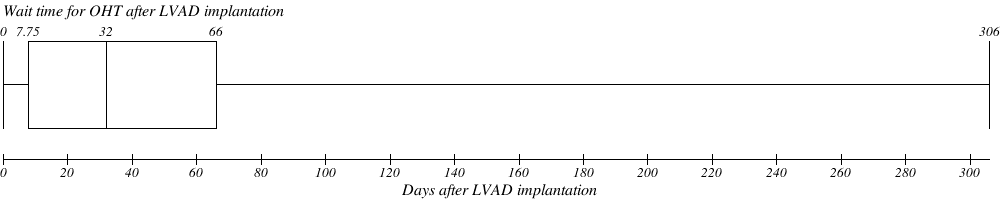
|  |  |  |  |
| --- | --- | --- | --- |
| **Table 1.** Baseline demographics of all LVAD patients, LVAD patients who underwent OHT, and LVAD patients who did not undergo OHT. | | | |
|
|  | **All LVADs (n = 2200)** | **OHT- (n = 2036)** | **OHT+  (n = 164)** |
|
| Mortality, n (%) | 590 (26.5) | 564(27.3) | 26 (15.9) |
| Length of stay, mean ± SD | 40.5 ± 38.9 | 37.1 ± 34.6 | 82.8 ± 59.3 |
| Age, mean ± SD | 53.4 ± 13.7 | 55.4 ± 13.2 | 48.2 ± 13.5 |
| Sex, n (%) | | | |
| Male | 1659 (75.4) | 511 (25.1) | 134 (81.7) |
| Female | 541 (24.6) | 1525 (74.9) | 30 (18.3) |
| Race, n (%) | | | |
| White | 1274 (57.9) | 1185 (58.2) | 89 (54.3) |
| Black | 352 (16.0) | 330 (16.2) | 22 (13.4) |
| Hispanic | 142 (6.5) | 125 (6.1) | 17 (10.4) |
| Asian/Pacific Islander | 51 (2.3) | 44 (2.2) | 7 (4.3) |
| Native American | 5 (0.2) | 5 (0.0) | 0 (0.0) |
| Otherǂ or unknown\* | 376 (17.1) | 347 (17.0) | 29 (17.7) |
| Median household income, n (%) | | | |
| $1-24,999 | 475 (21.6) | 447 (22.0) | 28 (17.1) |
| $25,000-34,999 | 491 (22.3) | 454 (22.3) | 37 (22.6) |
| $35,000-44,999 | 552 (25.1) | 509 (25.0) | 43 (26.2) |
| $45,000 or more | 631 (28.7) | 579 (28.4) | 52 (31.7) |
| Unknown\* | 51 (2.3) | 47 (2.3) | 4 (2.4) |
| Comorbidities | | | |
| Diabetes | 392 (17.8) | 373 (18.3) | 19 (11.6) |
| Hyperlipidemia | 310 (14.1) | 297 (14.6) | 13 (7.9) |
| Hypertension | 301 (13.7) | 291 (14.3) | 10 (6.1) |
| History of smoking | 144 (6.5) | 137 (6.7) | 7 (4.3) |
| BMI ≥ 30 kg/m2 | 96 (4.4) | 96 (4.7) | 0 (0.0) |
| Number of comorbid diagnosis, mean ± SD | 12.7 ± 2.9 | 12.8 ± 2.9 | 12.3 ± 3.1 |
| Location of hospital, n (%) | | | |
| Rural | 17 (0.8) | 17 (0.8) | 0 (0.0) |
| Urban | 2181 (99.1) | 2017 (99.1) | 164 (100.0) |
| Unknown\* | 2 (0.1) | 2 (0.1) | 0 (0.0) |
| Bedsize of hospital, n (%) | | | |
| Small | 38 (1.7) | 32 (1.6) | 6 (3.7) |
| Medium | 229 (10.4) | 211 (10.4) | 18 (11.0) |
| Large | 1931 (87.8) | 1791 (88.0) | 140 (85.4) |
| Unknown\* | 2 (0.1) | 2 (0.1) | 0 (0.0) |
| Teaching status of hospital, n (%) | | | |
| Nonteaching | 165 (7.5) | 160 (7.9) | 5 (3.0) |
| Teaching | 2033 (92.4) | 1874 (92.0) | 159 (97.0) |
| Unknown\* | 2 (0.1) | 2 (0.1) | 0 (0.0) |

\*Includes patients for whom data was invalid or not available

SD, standard deviation; LVAD, Left Ventricular Assist Device; OHT, Orthotopic Heart Transplant

**Figure 1.** Trends in in-hospital mortality among LVAD patients from 1998 to 2011. Percent mortality for each year was calculated as number of deaths by total number of LVAD patients. LVAD, Left Ventricular Assist Device

A



B

**Figure 2.** (A) Box-and-Whisker plot of wait time for OHT after LVAD implantation. (B) Comparison of percent mortality in hospitalized patients by wait time for OHT after LVAD implantation and no OHT after LVAD implantation. Percent mortality for each quartile was calculated as number of deaths per quartile by total number of patients per quartile. LVAD, Left Ventricular Assist Device

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table 2.** Baseline demographics for patients who waited 0-7 days, 8-31 days, 32-65 days, and ≥66 days for an Orthotopic Heart Transplant (OHT) after Left Ventricular Assist Device (LVAD) Implantation | | | | |
|
|  | **0-7 days (n = 41)** | **8-31 days (n = 38)** | **32-65 days (n = 42)** | **≥66 days  (n = 43)** |
|
| Length of stay, mean ± SD | 39.3 ± 33.2 | 48.9 ± 25.6 | 85.8 ± 40.1 | 151.2 ± 52.6 |
| Length of stay after OHT, mean ± SD | 23.8 ± 21.4 | 21.7 ± 15.8 | 27.6 ± 37.1 | 27.1 ± 22.8 |
| Mortality, n (%) | 11 (26.8) | 5 (13.2) | 5 (11.9) | 5 (11.6) |
| Age, mean ± SD | 50.6 ± 12.6 | 48.6 ± 12.7 | 47.4 ± 15.3 | 46.3 ± 13.1 |
| Sex, n (%) | | | | |
| Male | 33 (80.5) | 32 (84.2) | 35 (83.3) | 34 (79.1) |
| Female | 8 (19.5) | 6 (15.8) | 7 (16.7) | 9 (20.9) |
| Race, n (%) | | | | |
| White | 25 (61.0) | 19 (50.0) | 23 (54.8) | 22 (51.2) |
| Black | 3 (7.3) | 5 (13.2) | 8 (19.0) | 6 (14.0) |
| Hispanic | 3 (7.3) | 7 (18.4) | 2 (4.8) | 5 (11.6) |
| Asian/Pacific Islander | 2 (4.9) | 0 (0.0) | 1 (2.4) | 4 (9.3) |
| Native American | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Other or unknown\* | 8 (19.5) | 7 (18.4) | 8 (19.0) | 6 (14.0) |
| Median household income, n (%) | | | | |
| $1-24,999 | 4 (9.8) | 8 (21.1) | 8 (19.0) | 8 (18.6) |
| $25,000-34,999 | 10 (24.4) | 10 (26.3) | 10 (23.8) | 7 (16.3) |
| $35,000-44,999 | 12 (29.3) | 8 (21.1) | 10 (23.8) | 13 (30.2) |
| $45,000 or more | 12 9 (29.3) | 12 (31.6) | 14 (33.3) | 14 (32.6) |
| Unknown\* | 3 (7.3) | 0 (0.0) | 0 (0.0) | 1 (2.3) |
| Comorbidities | | | | |
| Diabetes | 8 (19.5) | 5 (13.2) | 4 (9.5) | 2 (4.7) |
| Hyperlipidemia | 5 (12.2) | 2 (5.3) | 3 (7.1) | 3 (7.0) |
| Hypertension | 5 (12.2) | 1 (2.6) | 2 (4.8) | 2 (4.7) |
| History of smoking | 5 (12.2) | 2 (5.3) | 0 (0.0) | 0 (0.0) |
| BMI ≥ 30 kg/m2 | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Number of concomitant diagnosis, mean ± SD | 11.9 ± 3.1 | 12.3 ± 3.0 | 12.5 ± 3.2 | 12.5 ± 3.2 |
| Location of hospital, n (%) | | | | |
| Rural | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Urban | 41 (100.0) | 38 (100.0) | 42 (100.0) | 43 (100.0) |
| Unknown\* | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Bedsize of hospital, n (%) | | | | |
| Small | 4 (9.8) | 0 (0.0) | 0 (0.0) | 2 (4.7) |
| Medium | 7 (17.0) | 6 (15.8) | 5 (11.9) | 0 (0.0) |
| Large | 30 (73.2) | 32 (84.2) | 37 (88.1) | 41 (95.3) |
| Unknown\* | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Teaching status of hospital, n (%) | | | | |
| Nonteaching | 1 (2.4) | 1 (2.6) | 2 (4.8) | 1 (2.3) |
| Teaching | 40 (97.6) | 37 (97.4) | 40 (95.2) | 42 (97.7) |
| Unknown\* | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |

\*Includes patients for whom data was invalid or not available

SD, standard deviation; LVAD, Left Ventricular Assist Device, OHT, Orthotopic Heart Transplant

**Table 3.** Complications in hospitalized patients with or without same-admission Orthotopic Heart Transplant (OHT) after Left Ventricular Assist Device (LVAD)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Early OHT  (n = 41)** | **Late OHT (n = 123)** | **OHT- (n = 2036)** | **Total (n = 2200)** |
| Acute renal failure | 24 (58.5) | 64 (52.0) | 963 (47.3) | 1051 (47.8) |
| Reoperation | 28 (68.3) | 87 (70.7) | 803 (39.4) | 918 (41.7) |
| Postoperative bleeding | 7 (17.1) | 30 (24.4) | 780 (38.3) | 817 (37.1) |
| Acute respiratory failure | 8 (19.5) | 37 (30.1) | 518 (25.4) | 563 (25.6) |
| Sepsis | 2 (4.9) | 17 (13.8) | 233 (11.4) | 252 (11.5) |
| Postoperative cardiac complication | 7 (17.1) | 15 (12.2) | 234 (11.5) | 256 (11.6) |
| Acute liver failure | 3 (7.3) | 9 (7.3) | 224 (11.0) | 236 (10.7) |
| Device failure | 0 (0.0) | 4 (3.3) | 62 (3.0) | 66 (3.0) |
| Stroke | 1 (2.4) | 1 (0.8) | 53 (2.6) | 55 (2.5) |

**SUPPLEMENTARY FIGURES**

**Supplementary Figure 1.**Percent mortality in hospitalized patients who received LVAD implantation by age.

**Supplementary Figure 2.** Percent mortality in hospitalized patients by day of LVAD implantation. The wait time for LVAD implantation was divided into quartiles with median = 6 days and IQR = 2-13 days. Percent mortality for each quartile was calculated as number of deaths per quartile by total number of patients per quartile. LVAD, Left Ventricular Assist Device

|  |  |
| --- | --- |
| **Supplementary Table 1.** Definitions of diagnosis and procedures by ICD9 codes | |
|
| **Diagnosis/Procedure** | **ICD9 Code(s)** |
|
| Left ventricular assist device | 3766 |
| Orthotopic heart transplant | 3751, 375 |
| Swan-Ganz catheterization | 8964 |
| Diabetes | 25000-25099 |
| Disorders of lipoid metabolism | 2720-2729 |
| Hypertension | 4010-4019 |
| History of or current use of tobacco | V1582, 3051 |
| BMI ≥ 30kg/m2 | 27800, 27801 |
| Reoperation | 3403, 3764, 3479, 341, 3749 |
| Sepsis | 99591, 99592 |
| Acute respiratory failure | 51881 |
| Postoperative cardiac complication | 9971, 4294 |
| Acute renal failure | 5845-5849 |
| Postoperative bleeding | 4513, 4523, 9904, 9905, 9907, 9909 |
| Stroke | 43491 |
| Acute liver failure | 570 |
| Device failure | 99609 |