VASCULAR CLINICAL COMPENDIUM

For over 35 years, LifeNet Health has been a leader in allograft implants. Our AngioGraft allografts deliver the high-quality and proven performance you expect for all of your procedures. The list of articles below demonstrates the efficacy of vascular solutions.

Studies Utilizing LifeNet Health Grafts

Magnetic Resonance Imaging Evaluation of Recipient for Cryopreserved Aortic Allograft – Kon, 1992

- Demonstrates the ability of LifeNet Health to deliver precisely matched grafts
  - This paper highlights the ability of MRI to accurately estimate the size of the allograft valve that will be required by a patient preoperatively
    - Subsequently, it also highlights the ability of LifeNet Health to find and distribute perfectly sized allografts at the request of a surgeon
    - In all 14 patients receiving allograft valves, preoperative annular measurements allowed LifeNet Health to select the appropriate size valve preoperatively
- Coupled with preoperative MRI-based measurements, allografts are an even better replacement valve for many patients
  - Allograft valves are known to have optimal hydraulic function, low incidence of thromboembolic complications, resistance to infection, and a better ability to perform complex reconstructions
    - Moreover, the use of preoperative measurements can allow surgeons with little access to tissue banks the ability to confidently order valves for individual procedures/patients

Click here for link.

Repair of Thoracic and Thoracoabdominal Mycotic Aneurysms and Infected Aortic Grafts Using Allograft – Corvera, 2018

- High risk patient population
  - This study utilized a retrospective review of 50 consecutive patients that underwent reconstruction for infected thoracic or thoracoabdominal aortic graft/primary infection
    - 34% had mycotic aneurysm, 66% has infected aortic graft, 42% had preoperative bacteremia/fungemia, 12% had hemoptysis, 4% had a gastrointestinal bleed, 8% had an aortic rupture, 52% presented with pseudoaneurysm, and prior cardiac operation was present in 74% of patients
    - Mortality for reoperative repair of these infections is 25% - 75%
- Positive performance of allograft
  - 1, 2 and 5 year survival was 84%, 76%, and 64% respectively
  - Despite the increased risk of pseudoaneurysm, aortic grafts are still very useful in the treatment of infected grafts/primary infections

Click here for link.

General Support for Vascular Allografts

Arterial Reconstruction with Cryopreserved Human Allograft in the Setting of Infection: A Single-Center Experience with Midterm Follow-up – Brown, 2008

- Well-matched, high-risk study cohorts
  - Retrospective review of 52 patients that received allografts and 53 patients that received autogenous/prosthetic graft for infected prosthetic graft replacement
- Allograft outperformed non-allograft
  - Allograft cohort had lower percent mortality at 30 days and 1 yr
  - Allograft cohort had only 5 complications in the 20 months following surgery

Click here for link.

Suggested Treatment Protocol for Improving Patency of Femoral-Infrapopliteal Cryopreserved Saphenous Vein Allografts – Buckley, 2000

- Prospective trial
  - Although this study has small patient size (24), the prospective nature reduces variability
    - All patients received identical pre/post-operative care
- Suggested treatment protocol with great results
  - Surgeons in this study matched all patients and allografts by ABO and Rh compatibility
    - Limb salvage was 88% at 6 months and 80% at 12,18 and 24 months

Click here for link.

Cryopreserved Arterial Allograft Reconstruction After Excision of Thoracic Malignancies – Gomez-Caro, 08

- Overview of how cryopreserved vessels are used for large tumor resections.
- Use of HLA and ABO mismatched arterial allografts with successful results
  - 14 patients received arterial and 12 patients received venous revascularization
    - 5 yr survival and patency were 84% and 95% respectively
    - Anti-HLA antibody was detected in 1/24 patients (not significant)

Click here for link.

Femorodistal Bypass Using Cryopreserved Venous Allografts for Limb Salvage – Leseche, 1997

- High risk patient population
  - 16/25 patients had one/more previous limb salvage procedures
  - 16/25 patients had incomplete/absent plantar arch
- Good survival/patency rates
  - Survival rate was 77% at 1 yr and 72% at 2 years
  - Secondary patency rate was 88% at 1 month, 72% 6 months, and 52% at 1 yr

Click here for link.

Management of Infected Hemodialysis Access Grafts Using Cryopreserved Human Vein Allografts – Lin, 2002

- High risk patient population
  - 38 patients received 45 allografts for AV access
    - 22 were replacements of infective prosthetic AV grafts
    - 14 were due to remote sepsis/bacteremia
    - 2 were for compromised outflow central veins
- Strong performance of allografts
  - 68% patency at 1 year which was par with 1 yr patency for prosthetic grafts at this institution
  - No instances of reinfection
    - 2 patients developed aneurysmal degradation

Click here for link.

Experience with Cryopreserved Cadaveric Femoral Vein Allografts Used For Hemodialysis Access – Madden, 2004

- Good size study population
  - 90 patients received allograft (48 = cryopreserved; 42 = cryopreserved and decellularized) while 100 patients received PTFE
- Par performance of allograft
  - Primary and secondary patencies were similar at 1 and 2 years
  - PTFE vs CRY/SYN infection rate = 10% vs 0%
  - PTFE vs CRY/SYN aneurysm rate = 2% vs 18%
  - PTFE vs CRY/SYN steal syndrome rate = 12% vs 12%

Click here for link.

Preserved Allografts of Dilated Saphenous Vein for Vascular Access in Hemodialysis – Piccone, 1975

- Early study that shows good results for AV access in hemodialysis
  - 1975 study showing this data could be used to show continuity in the procedure
- Allografts performed well
  - Authors note that allograft veins appear to be useful alternative to autografts and bovine heterografts

Click here for link.

Fifteen Years of Infrapopliteal Arterial Reconstruction with Cryopreserved Venous Allografts for Limb Salvage – Randon, 2010

- Consistency in study population
  - Retrospective review of 92 patients that received allograft vein for critical leg ischemia at within a group of surgeons
  - All patients received same post-operative immunosuppressive therapy
- Par/better performance of allografts than prosthetic grafts
  - Primary and secondary patency
    - 56% and 73% at 1 yr
    - 32% and 60% at 3 years
    - 17% and 38.5% at 5 years
  - Survival rates were 87.4% at 1 year and 64.5% at 5 years

Click here for link.

Eradication of Aortic Infections With the Use of Cryopreserved Arterial Homografts – Vogt, 1996

- High risk patient population
  - 9/19 patients has mycotic aneurysms and 10/19 had infected grafts
  - Sepsis was present in 14/19 patients and 18/19 had received avg 6.4 months of antibiotics before surgery
  - Up to 10 vascular procedures had been performed on 11/19 patients
- Strong performance of allografts
  - 1 death related to allograft
  - No reinfections, suture line rupture, allograft stenosis, or anastomotic aneurysms in avg 18.6 month follow-up period

Click here for link.

In Situ Repair of Aortobronchial, Aortoesophageal, and Arotoenteric Fistulae with Cryopreserved Aortic Homografts – Vogt, 1997

- High risk patient population
  - 8/11 patients were operated on in an emergency setting
- Strong performance of allografts
  - 1 sudden cardiac death 7 days after surgery
  - No reinfection, suture line rupture, or anastomotic aneurysms were observed in avg 14.3 month follow-up period

Click here for link.

1864 Concert Drive
Virginia Beach, VA 23453
Phone: U.S. 1-888-847-7831 ☐ 1-757-464-4761 x2000 (OUS)
Fax: U.S. 1-888-847-7832 ☐ 1-757-464-6439 (OUS)

LifeNetHealth.org

68-20-273.00