The Effect of a Limb Preservation Center on Patterns of Surgical Bypass

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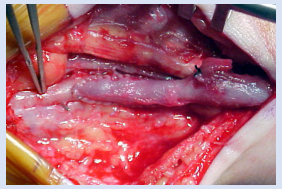
Background

- Endovascular revascularization has led to a decrease in the number of surgical bypasses performed in a standard vascular practice.
- Surgical bypass has become more challenging due to a lack of venous conduit, bypass after failed endovascular interventions, and a lack of outflow targets (so called "desert foot")
- We examined the effect of a limb preservation practice on the number of bypasses performed and type of bypass required.

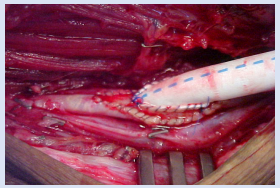
Methods

- Infrainguinal bypass procedures after institution of a multidisciplinary limb preservation program (2016-2022)
- Indications: CLTI
- Number of bypasses compared to endovascular procedures
- Conduit choice
  - Vein
  - Prosthetic (with or without anastomotic adjunct)

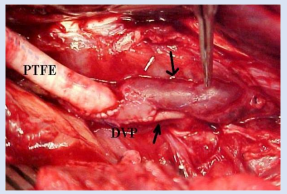
Vein



Distal Vein Patch

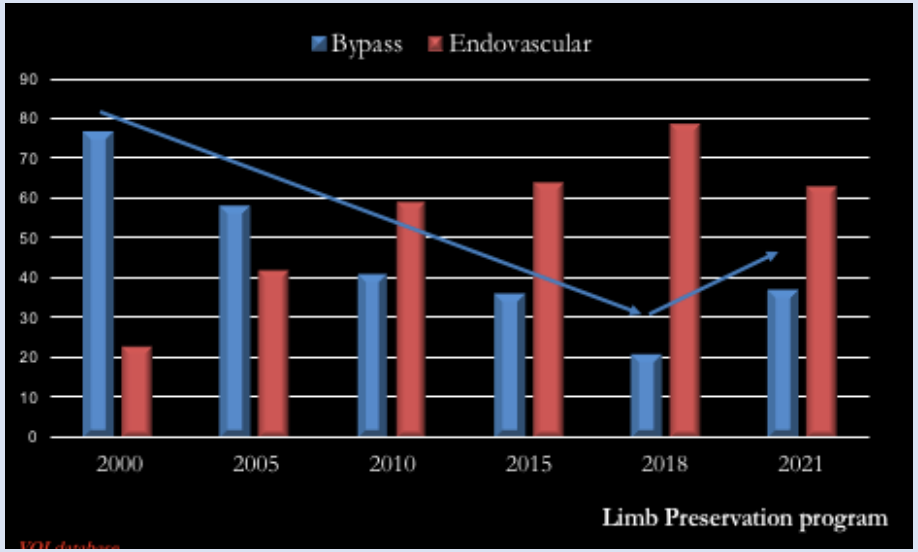


Distal Arteriovenous Fistula

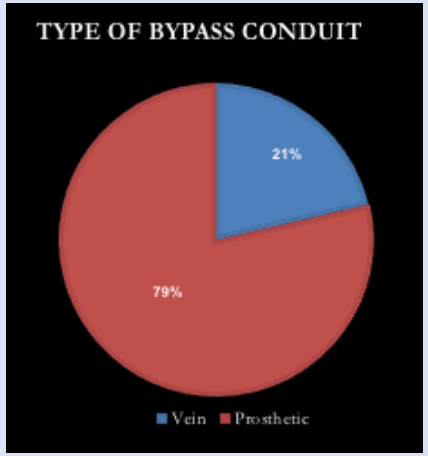


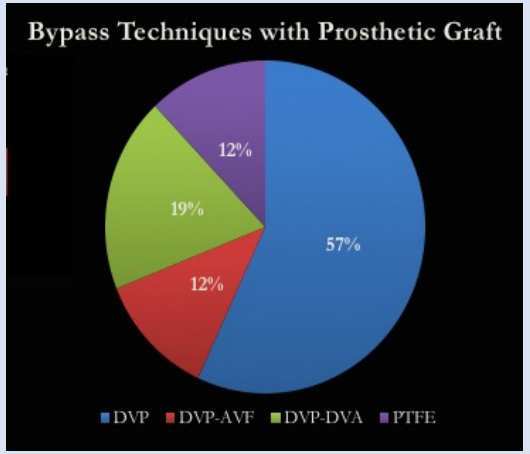
Deep Vein Arterialization

Results



Percentage of open bypass vs endovascular intervention before and after institution of a limb preservation center (VQI database)





Results

- 103 bypasses performed in Limb Clinic interval
- Tibial bypass in 75%
- 48% performed after failed endovascular therapy
- Prosthetic conduit required in 79%
- Prosthtetic bypass
  - Anastomotic adjuncts in 88%
  - HePTFE alone in 12%

Conclusion

A limb preservation practice does impact the pattern of revascularization performed especially in regard to surgical bypass

1. Increasing trend to surgical bypass
2. Tibial bypass more common than femoral-popliteal
3. Surgical bypass often performed after failed endovascular intervention
4. Increasing use of prosthetic conduit due to lack of vein and increased anatomic complexity
5. The use of prosthetic conduit led to a significant use of anastomotic adjuncts