AV FISTULA – STATE OF THE ART

EUROPEAN GUIDELINES

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STOCKHOLM, SWEDEN
OTHER GUIDELINES

- **K-DOQI**
  - 1997, 2006
  - REVISION IN PROGRESS => 2020 (CACVS 2019; C LOK)
  - 130 => 163 STATEMENTS/RECOMMENDATIONS [<=] ESVS 80
  - 33% LEVEL A-B; 66% LEVEL C

- **ERA-EDTA-EBP**

- **MISC**
  - CLINICAL PRACTICE GUIDELINE: VASCULAR ACCESS FOR HEAMODIALYSIS, UK RENAL ASSOCIATION 2015
  - SPANISH CLINICAL GUIDELINES ON VASCULAR ACCESS FOR HEAMODIALYSIS, 2017
REASONS TO DEVELOP YOUR OWN

• K-DOQI, FISTULA FIRST ETC.

• AVF VS. AVG
  • 2004 SWEDEN 10-15% AVG
WHY?

- INCREASINGLY IMPORTANT FOR VASCULAR SURGERY
  - NEPHROLOGISTS => UROLOGISTS
  - TRANSPLANT SURGEONS => VASCULAR SURGEONS => ACCESS SURGEON (AV ACCESS-CATHETERS-PD’S-OPEN/ENDO)

- INCREASING DEMAND FOR RRT
- VARIABLE PRACTISE IN EUROPE
- TRAINING
GUIDELINE PROCESS

• STARTED IN 2013
• PUBLISHED IN 2018
• WRITING GROUP: 19 AUTHORS FROM 10 DIFFERENT COUNTRIES
• MULTIDISCIPLINARY REPRESENTATION FROM:
  VASCULAR SURGERY, TRANSPLANTATION, DIALYSIS NURSING, NEPHROLOGY, INTERVENTIONAL RADIOLOGY, IMAGING
• ESVS GUIDELINE COMMITTEE


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ESVS Guidelines Reviewers ‡, Markus Mohaupt, Jean-Baptiste Richo, Ramon Roca-Tey

Citations <100
CONTENT

1. METHODOLOGY, DEFINITION OF VASCULAR ACCESS
2. EPIDEMIOLOGY OF CKD AND AV ACCESS
3. CLINICAL DECISION MAKING
4. PRE-OP IMAGING
5. CREATION OF VASCULAR ACCESS
6. SURVEILLANCE OF VASCULAR ACCESS (CANNULATION, ACCESS MONITORING AND SURVEILLANCE, NURSING ORGANIZATION)
7. LATE VASCULAR ACCESS COMPLICATIONS (ACCESS ANEURYSMS, INFECTION, STENOSIS, THROMBOSIS, VASCULAR ACCESS INDUCED LIMB ISCHAEMIA AND HIGH FLOW VASCULAR ACCESS)
8. COMPLEX OR TERTIARY HAEMODIALYSIS VASCULAR ACCESS
9. GAPS IN THE EVIDENCE
WHAT’S USEFUL?

• WELL STRUCTURED
• MULTIDISCIPLINARY PERSPECTIVE
  • DIALYSIS, NEEDLING, SURVEILLANCE
• ALGORITHMS
• PROCEDURES FOR HAND ISCHEMIA AND HIGH FLOW ACCESS
LIMITATIONS

• FOR VASCULAR ACCESS SURGERY RATHER THAN DIALYSIS CARE

• POOR EVIDENCE BASE (‘EVIDENCE FREE ZONES’)
  • TREATMENT OF COMPLICATIONS

• RECOMMENDATIONS FOR VASCULAR/HEMODIALYSIS ACCESS ONLY
  • NOT FOR COMPLETE RRT/ACCESS (- PD)

• UP-TO-DATE?
  • 2013->2018
  • IDEAL <4 YEARS

• INDIVIDUALIZED ACCESS PLANNING?

| Table 1. Level of evidence for treatment recommendations in ESVS guidelines. |
|-------------------------------|-------------------|----------------|------------------|----------------|
|                              | Vascular access   | Carotid disease| Thoracic aorta  | Mesenteric vessels |
| Level A                       | 10%               | 24%            | 0%              | 3%              |
| Level B                       | 20%               | 30%            | 10%             | 30%             |
| Level C                       | 70%               | 47%            | 90%             | 67%             |
| Total recommendations         | 80 (100%)         | 118 (100%)     | 86 (100%)       | 64 (100%)       |
Patient oriented
• Quality of life
• Longevity
• Home dialysis
• Economically feasible

ESVS VA Guidelines 2018

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Class</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral of chronic kidney disease patients to the nephrologist and/or surgeon for preparing vascular access is recommended when they reach stage 4 of chronic kidney disease (glomerular filtration rate &lt; 30 ml/min/1.73 m²), especially in cases of rapidly progressing nephropathy.</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>A permanent vascular access should be created 3–6 months before the expected start of haemodialysis treatment.</td>
<td>I</td>
<td>B</td>
</tr>
<tr>
<td>An autogenous arteriovenous fistula is recommended as the primary option for vascular access.</td>
<td>I</td>
<td>A</td>
</tr>
<tr>
<td>The radiocephalic arteriovenous fistula is recommended as the preferred vascular access.</td>
<td>I</td>
<td>B</td>
</tr>
<tr>
<td>When vessel suitability is adequate, the non-dominant extremity should be considered as the preferred location for vascular access.</td>
<td>IIa</td>
<td>C</td>
</tr>
<tr>
<td>A lower extremity vascular access should be considered only when upper extremity access is impossible.</td>
<td>IIa</td>
<td>C</td>
</tr>
<tr>
<td>Tunneled cuffed central venous catheters as a long standing haemodialysis modality should be considered when the creation of arteriovenous fistulas or grafts is impossible or in patients with limited life expectancy.</td>
<td>IIa</td>
<td>B</td>
</tr>
</tbody>
</table>

K-DOQI 2020

Patient centered

ESKD Life-Plan

Stage KD | I | II | III | IV | Transplant

Creation Plan
Contingency Plan
Succession Plan

Validation

Patient
Life-Plan
Access
Needs

DAVIDSON I, GALLIENI M, DOLMATCH B. A PATIENT CENTERED DECISION-MAKING DIALYSIS ACCESS ALGORITHM. J VASC ACCESS, 2007; 8: 59-68

LOK CE, DAVIDSON I. OPTIMAL CHOICE OF DIALYSIS ACCESS FOR CHRONIC KIDNEY DISEASE PATIENTS: DEVELOPING A LIFE PLAN FOR DIALYSIS ACCESS. SEMIN NEPHROL. 2012; 32:530-537
CONCLUSIONS

• ESVS VASCULAR ACCESS GUIDELINES
  • ‘COOK-BOOK’ IN VASCULAR ACCESS FOR VASCULAR SURGEONS
  • EDUCATIONAL MULTIDISCIPLINARY INSIGHTS
    • TRAINING
    • LESS IMPACT FOR DIALYSIS CARE

• SCIENTIFICALLY EVIDENCE-POOR FIELD
  • RESEARCH AND RCTS NEEDED

• TECHNOLOGY RAPIDLY ADVANCING
  • UPDATES NEEDED (<3-4 YEARS)

• IMPACT VS. K-DOQI 2020?
Welcome to the 1st ESVS Translational Meeting in collaboration with ESVB to promote Translational Science in European Vascular Surgery @ Bioclinicum, Karolinska University Hospital.

This meeting aims to merge basic researchers, industry and physicians to provide scientific updates on burning issues in peripheral vascular disease (aneurysms, CVD Risk, thrombosis, restenosis, carotid disease), vascular biology, vascular biomaterials, education, imaging...

Oral abstract presentations and posters with Young Investigator Awards and Young Scientist Workshops.

Abstract Submission & Registration OPEN
https://www.esvs.org/presentation/

Extended Abstract Submission Deadline
February 16th

Affordable Registration for Students
€ 100