Current State Of Vascular Access In Chronic Hemodialysis Patients In Algeria

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“We believe that we can keep alive patients with uremia as long as the veins and arteries are in good condition.”

Willem Kolff, 1944
In ALGERIA..

- Population of 37,100,000 inhabitants.
- Prevalence of ESRD 350 PMP
- Incidence of 94 PMP (3,500 New cases/year)
- 17,416 ESRD Patients
- 15,232 Patients on HD: 274 Hemodialysis center
  - 154 Public Centers 8,013 patients
  - 120 Private Centers 7,219 patients
- 430 patients on Peritoneal Dialysis (90 Infants)
- 100 Renal Transplantation / year (3%)

ESRD: end stage renal disease
HD: hemodialysis
• Despite all the progress made in the techniques of renal replacement therapy, survival on hemodialysis (HD) depends in a large part on the quality of vascular access.

• Vascular access and its eventual complications remains the leading cause of morbidity in hemodialysis patients.
Objective of the study

1. identify what type of vascular access for Hemodialysis is made on first intention?

2. realize a clinical expertise on the vascular access for dialysis in patients after a certain period of HD.
Patients and Method :

- Prospective study.
- Multicenter

- Datas collated on 60 days (data collection and statistical study)
- **1029** chronic Hemodialysis patients.

- **21** Hemodialysis centers (public and private center) located in the capital city of Algiers and neighboring towns.
# Questionnaire sent to the treating Nephrologist

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Origin</th>
<th>Initial Neph</th>
<th>Diabete</th>
<th>HTA</th>
<th>other Path.</th>
<th>Date of 1st HD</th>
<th>Numb Jug Cath</th>
<th>Numb Fem Cath</th>
<th>Numb Tunnelled Cath</th>
<th>Num Gore-tex</th>
<th>Numb AVF</th>
<th>AVF life span</th>
<th>Proximal/distal AVF</th>
<th>Cause of no functioning AVF</th>
<th>Current state of vessels</th>
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RESULTS
Gender

Female: 53%
Male: 47%
Sex Ratio = 1.12
Age

Extremes ages: 13-94 years

- 0-9 years: 0%
- 10-19: 1.7%
- 20-29: 10%
- 30-39: 14%
- 40-49: 17.5%
- 50-59: 26%
- 60-69: 17%
- 70-79: 11%
- 80+ years: 2.80%
Distribution by age /gender

**Male**

**Female**
Life span on HD

- < 5 years: 71%
- 5-10 years: 21%
- >10 years: 8%
- < 5 years: 21%
- 5-10 years: 8%
- >10 years: 71%
First access for HD was...
First AVF was...
## Total of AVF Vs Life span on HD

<table>
<thead>
<tr>
<th></th>
<th>0-5 years</th>
<th>6-10 years</th>
<th>11-15 years</th>
<th>&gt;15 years</th>
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<tbody>
<tr>
<td>01 AVF</td>
<td>557 patients</td>
<td>223 Patients</td>
<td>69 Patients</td>
<td>19 Patients</td>
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<tr>
<td>2 AVF</td>
<td>53</td>
<td>10</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>3 AVF</td>
<td>16</td>
<td>8</td>
<td>2</td>
<td>3</td>
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<td>4 AVF</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5 AVF</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Tunneled Cath</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>642 patients</td>
<td>256 patients</td>
<td>90 Patients</td>
<td>41 Patients</td>
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</table>
Clinical evaluation of vascular access for HD (less than 10 years on HD)

- Preserved: 84%
- Consumed: 16%
Sex Ratio was identical

Relatively young population (40-60 years)

Percentage of undetermined nephropathy remains elevated.

Percentages of Diabetic and Hypertensive Nephropathies join International datas.
Central Catheter remains the leading access for HD.
(Despite 40% AVF on first intention → Follow-up of uremic patients before ESRD)

1 Patient/2: First AVF Proximal than Distal

1 patient/5 has «a Poor Vascular capital» within 10 years of dialysis.
CONCLUSION

- Vascular Capital of hemodialysis patients is **VITAL**.
- Great interest to preserve it preciously:
  → Education of uremic patients and nursing staff.
  → Careful assessment of where anastomosis should be performed using radiological investigation if necessary.
  (Distal>>Proximal)
  → Regular radiological monitoring of the vascular access.

- Multidisciplinary planning seems essential to achieve this goal and thus improve the **survival** of patients on chronic hemodialysis.
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- Dr Belhaoua EPH Ain defla
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- Dr Dif, EPH berouaghia
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GRACIAS !