

MULTIDISCIPLINARY VASCULAR ACCESS SURVEILLANCE IN THE NETHERLANDS; FROM LOCAL INITIATIVE TO NATIONAL STANDARD

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PROBLEM: Thrombosis is the major complication of the vascular access in hemodialysis patients. Mostly thrombosis is associated with stenosis. It is accepted that vascular access surveillance and early referral for PTA decrease the risk of thrombosis. The Taskforce of the NKF/DOQI recommend a thrombosis rate of <05 per patient-year as quality standard.

PURPOSE: On behalf of a efficiency project we examined whether the effects of vascular access surveillance would attain these quality standards.

DESIGN: The guidelines of the NKF/DOQI were used to develop procedures for patient care and surveillance. Structural access surveillance was integrated in the standard dialysis nursing care and contained three subjects:

1. basic nursing observation
2. the VP0/MAP
3. Transonic flow measurements.

Referral for further diagnostics and/or intervention started when flow limits were gained.

Effectparameters were frequency of thrombosis, number of interventions and catheterdays

FINDINGS: On 01-08-1999 the observation started followed by surveillance on 01-05-2000.

EFFECTS OF SURVEILLANCE

AVF	Before surveillance	After surveillance	AVG	Before surveillance	During surveillance
Patients	100	96	patients	43	36
Accesses	102	101	aceses	59	38
patient years	63.24	64.45	Patient years	24.4	24.2
Thrombosis	13	9	Thrombosis	51	15
Thrombosis/p.year	0.20	0.13	Thrombosis/p.year	2.09	0.61
Angiography/p.year	0.17	0.35	Angiography/p.year	0.94	1.19
Surgical I. due to stenosis without thr./p.year	0.09	0.03	Surgical I. due to stenosis without thr./p.year	0.32	0.61
PTA/p.year	0.09	0.15	PTA/p.year	0.32	0.12
Interventions due to thrombosis/p.year	0.09	0.06	Interventions due to thrombosis/p.year	1.47	0.57
Catheters/p.day	6.2	1.3	Catheters/p.day	13.8	8.6

CONCLUSION AND RELEVANCE: The results show that vascular access surveillance decrease the frequency of thrombosis. The number of interventions due to stenosis without thrombosis increase. We find that our strategy is cost effective and has a positive effect on the quality of life of the patient.

Due to the results this initiative is now part of a national program. 30 of the 52 hemodialysiscenters in the Netherlands are included. More than 3000 patients will participate in this quality program. Three dialysis nurses operate in the three major regions as vascular access coordinators with a grant of the national kidney foundation.