

CATÈTERS VENOSOS CENTRALS

.....uns vells companys de feina.

La canalització d'una vena central com accés d'hemodiàlisi es un procediment utilitzat ja des dels inicis de la tècnica

avantatges

Fàcil inserció

Permet una diàlisi immediata

La tècnica d'inserció ha anat evolucionant amb els avenços tecnològics que s'han notat en tots els seus elements, però el "nucli" continua sent el mateix.

Agulles

Guies

Dilatadors

Introdutors

Fixació



VASOS

Femoral

La mes versàtil però també més etèria.

Subclàvia

Poca infecció, però complicacions a la col.locació i lesió tardana del vas.

Jugular

Bona accessibilitat amb orifici anatòmicament incorrecte.

Els tunelitzats reunirien lo bo de les subclàvies i jugulars

En quan al disseny hi ha hagut una evolució important .

Gruix de 8 F 14/15 F

Una llum

Doble llum

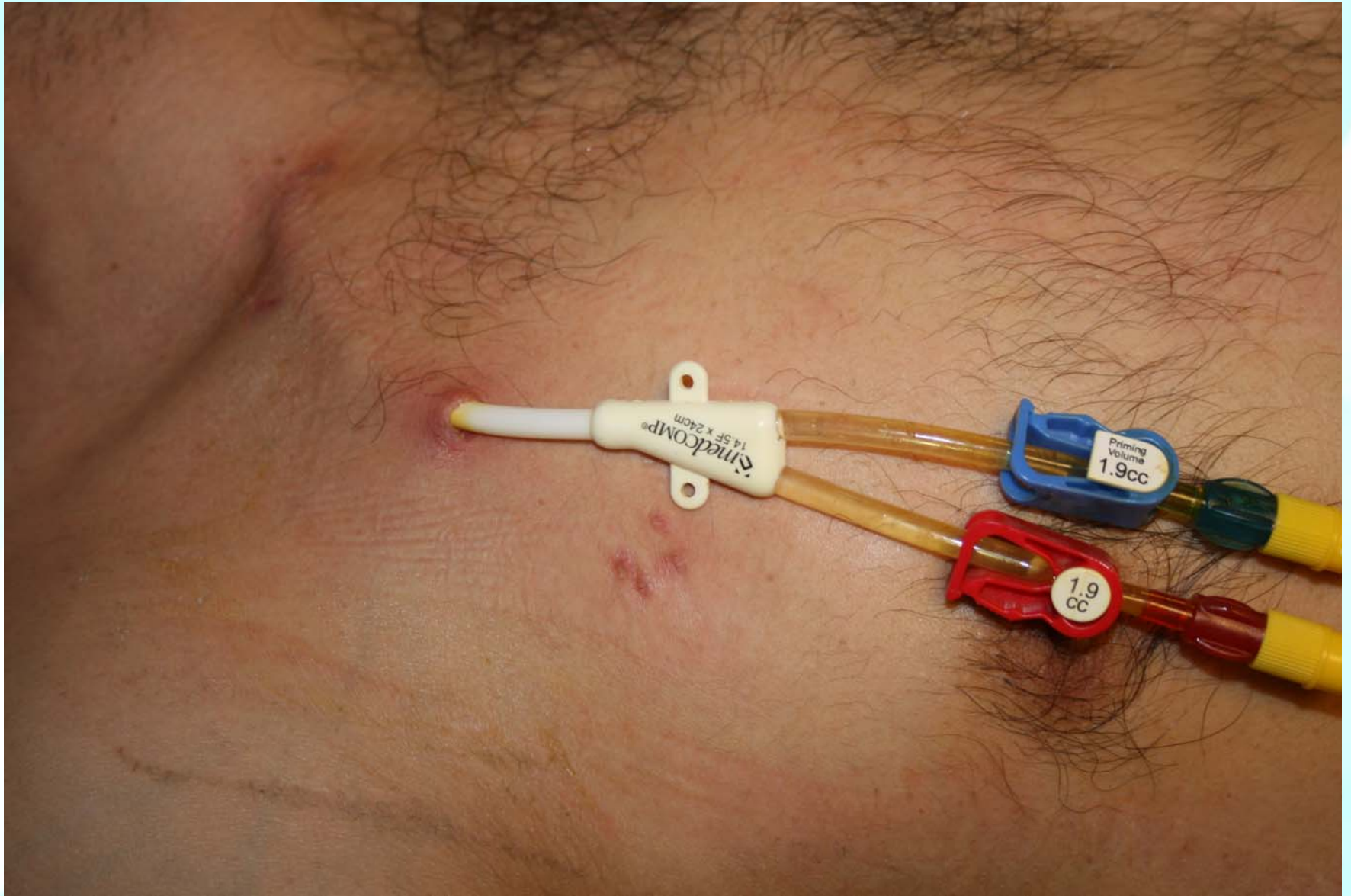


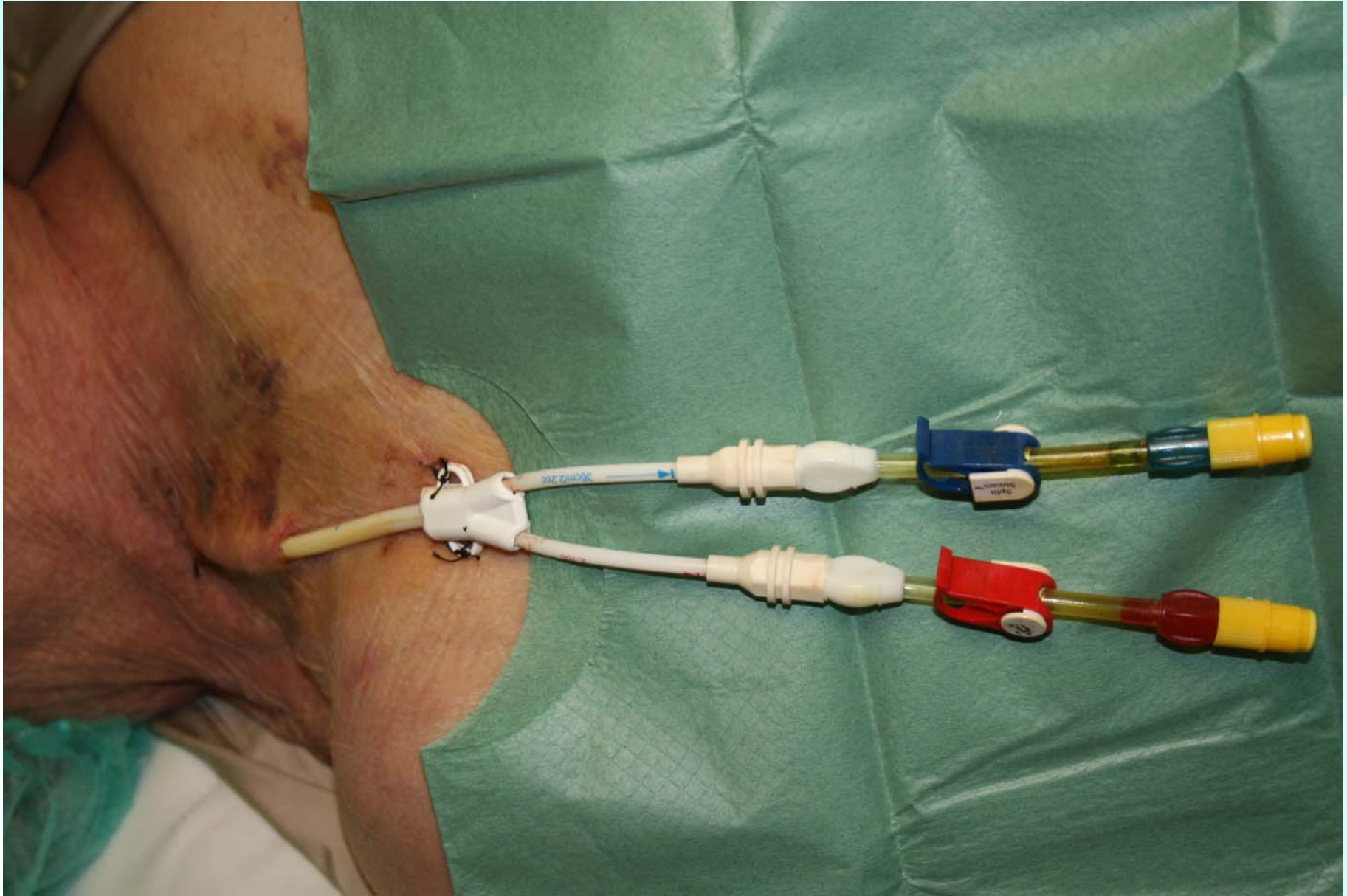
Tunelitzar

Dos catèters independents

Tunelitzar / Introduir

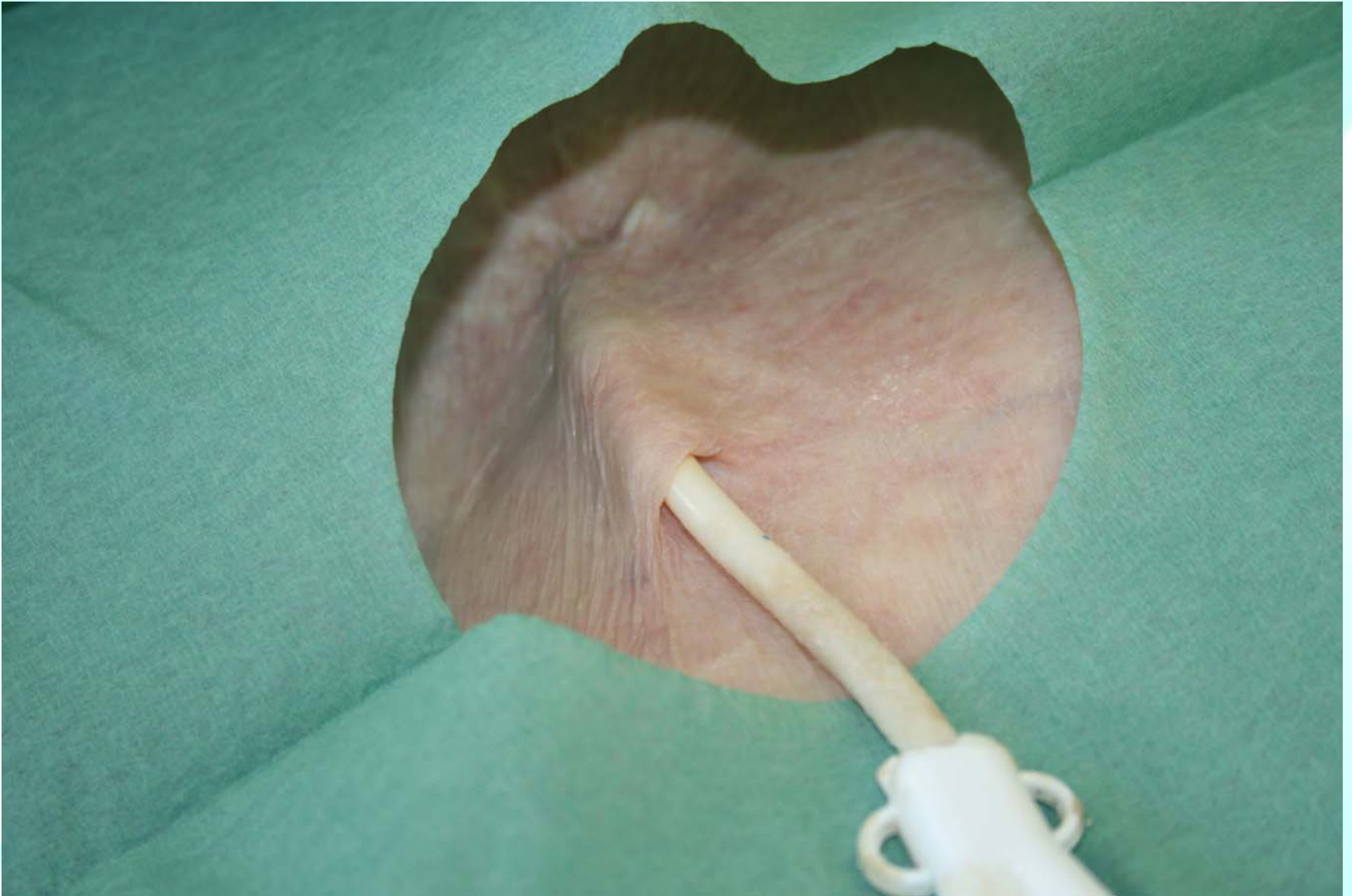
Introduir / Tunelitzar





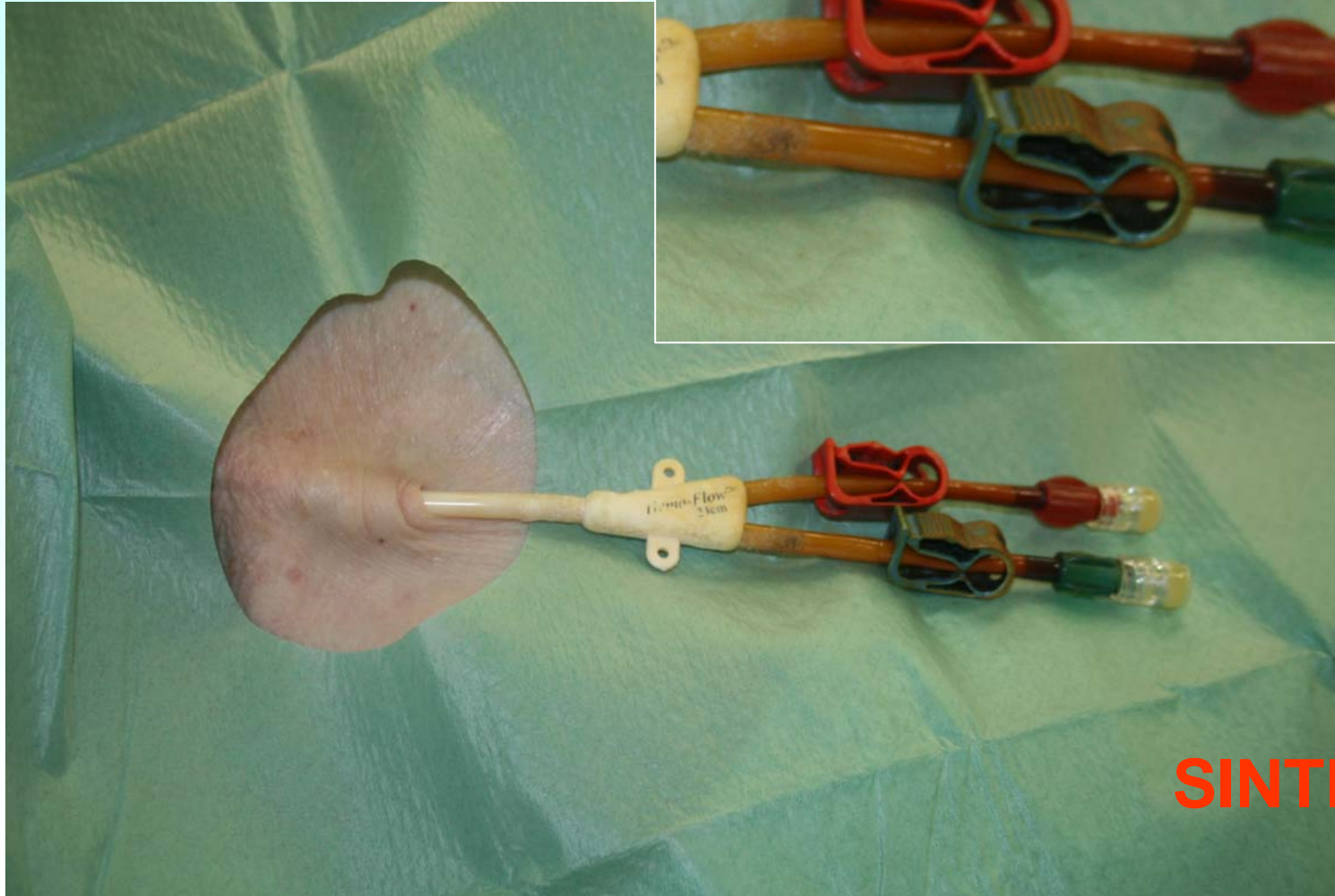






Dona 82 a.

Data col.locació 23/03/2006



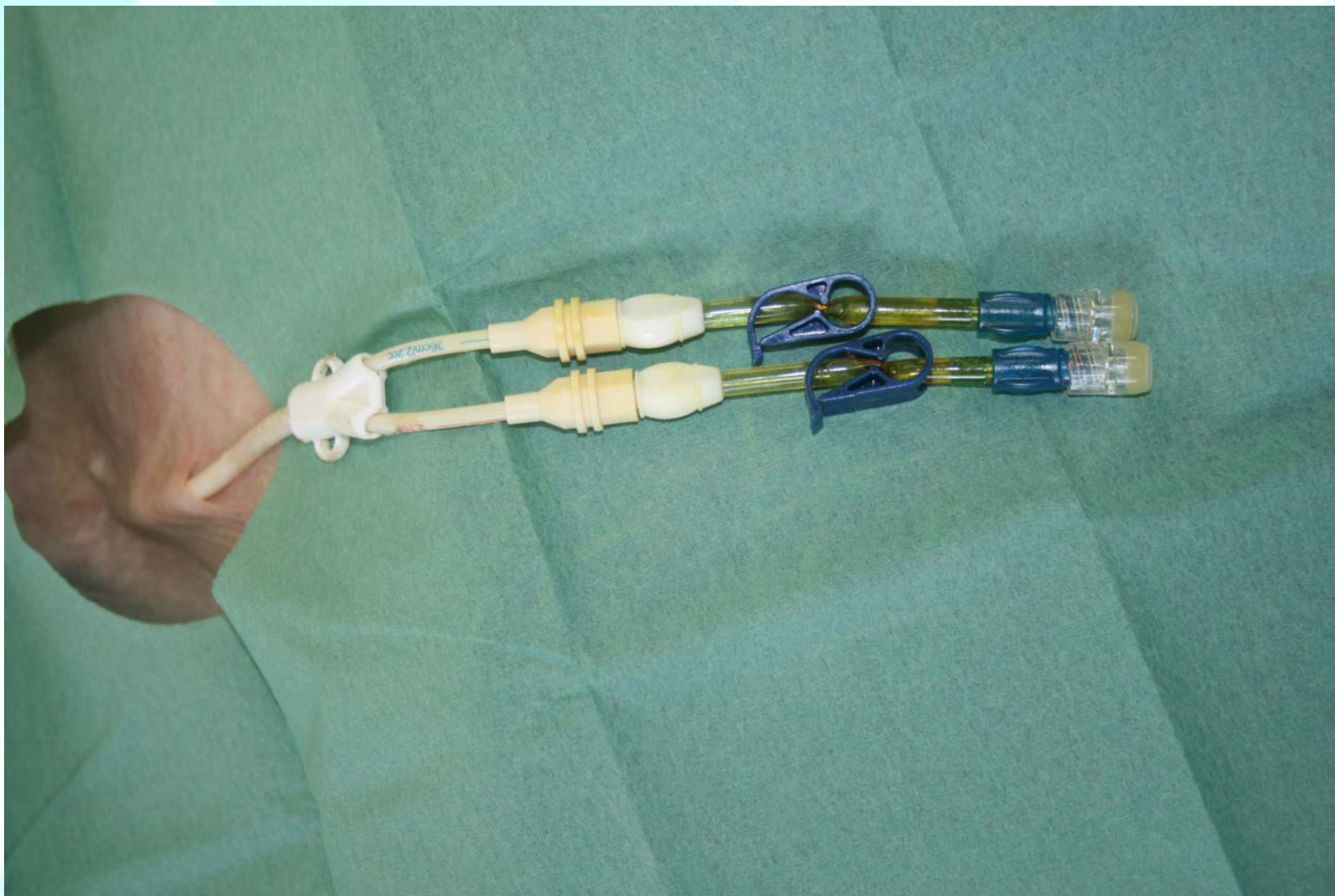
SINTROM



Home 82 a.

Data col.locació 12/12/2006





Dona, 88 a.

Data de col.locació: 25-09-2007

El catèter ha estat protagonista negatiu a la premsa dels últims anys. Totes les publicacions fan referència a les seves complicacions o incompetències

□ 1: [Adv Chronic Kidney Dis](#). 2009 Sep;16(5):386-95.

Tunneled dialysis catheters: recent trends and future directions.

[Chan MR](#), [Yevzlin AS](#).

Section of Nephrology, University of Wisconsin School of Medicine and Public Health, Madison, WI, USA.

Despite aggressive efforts to increase autogenous fistula prevalence primarily from recommendations by the NKF and the Fistula First National Vascular Access Improvement Initiative, catheters remain an essential access modality for a large percentage of the hemodialysis population. Tunneled dialysis catheters or chronic catheters are associated with a multitude of complications including infections, stenosis, thrombosis, and increased morbidity and mortality even after adjustment for potential confounding variables. Also, given the blood flow rates of catheters, dialysis adequacy is compromised as compared with arteriovenous fistulae and arteriovenous grafts. This review endeavors to provide an update on catheter outcomes in the Fistula First and Kidney Disease Outcomes Quality Initiative era in relation to the increasing fistula prevalence and decline in graft placements. The conflicting view of whether catheters are increasing concurrently with the increase in fistula prevalence is discussed. The management of tunneled dialysis catheter-related complications is considered with a review of the most recent data. Future research strategies and innovations in catheter design are also addressed. This review provides a comprehensive update of tunneled hemodialysis catheters, their necessity and pitfalls, and novel directions for future investigation.

PMID: 19695507 [PubMed - indexed for MEDLINE]

Un catèter obre una via de comunicació entre l'espai intravascular i l'exterior, saltant-se totes les barreres de defensa de l'organisme.

La infecció només és qüestió de temps

L'organisme interpreta el catèter com un cos estrany, i intenta primer exterioritzar-lo, i si no pot, aïllar-lo.

La proliferació de teixit al voltant del catèter originarà la disminució del seu cabal i la trombosi .

ESTAT INFLAMATÒRI

La tecnologia ha anat millorant i desenvolupant nous dissenys amb la finalitat de resoldre o minimitzar els aspectes negatius del seu ús .

També i des de sempre i **SENSE DUBTE** s'ha considerat la **FAVI** com el **MILLOR** accés vascular.



Millor HD

Millor portabilitat

Menys complicacions

Un catèter és un colonitzador passiu d'un vas .

Una FAVI es una comunicació activa entre una artèria i una vena.

1: [Hypertens Res.](#) 2009 Aug;32(8):712-5. Epub 2009 Jul 10.

The association between pulse pressure and vascular access thrombosis in chronic hemodialysis patients.

[Chou CY](#), [Liu JH](#), [Kuo HL](#), [Liu YL](#), [Lin HH](#), [Yang YF](#), [Wang SM](#), [Huang CC](#).

Institute and Division of Nephrology, Department of Internal Medicine, China Medical University Hospital, Taichung 40461, Taiwan.

Vascular access thrombosis (VAT) is a major cause of morbidity in chronic hemodialysis (HD) patients and is characterized by chronic inflammation. Pulse pressure (PP) is positively associated with chronic inflammation. Whether patients with high PP are at a higher risk for VAT, however, remains unknown. We retrospectively reviewed chronic HD patients with a functional vascular access point at the China Medical University Hospital between 1986 and 2005. The association between PP and the initial development of VAT at the primary vascular access point was examined using the Kaplan-Meier analysis and multivariate Cox proportional hazards regression. A total of 576 chronic HD patients (264 men and 312 women) with a mean age of 56.9+/-14.0 years were reviewed, of whom 145 (25.2%) experienced at least one episode of VAT. Patients with a PP>60 mm Hg had a lower VAT-free survival rate compared with those with a PP<60 mm Hg (P<0.001). Using Cox regression with adjustments for age, systolic blood pressure and vascular access types, PP (every increase of 10 mm Hg) and serum C-reactive protein (CRP) (every increase of 1 mg per 100 ml) were found to be independently associated with an increasing risk for VAT, with hazard ratio of 2.57 (95% confidence interval: 1.5-4.4, P=0.001) and 1.14 (95% confidence interval: 1.01-1.27, P=0.017), respectively. PP was associated with the development of VAT in chronic HD patients. This association was independent of serum CRP levels.

PMID: 19590503 [PubMed - in process]

1: [Kidney Int.](#) 2002 Feb;61(2):717-26.

Pulse pressure and risk of total mortality and cardiovascular events in patients on chronic hemodialysis.

[Tozawa M](#), [Iseki K](#), [Iseki C](#), [Takishita S](#).

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□ 1: [Int J Clin Pract.](#) 2006 Dec;60(12):1596-9. Epub 2006 May 16.

Hyperhomocysteinaemia and vascular access thrombosis among chronic hemodialysis patients in Taiwan: a retrospective study.

[Chen TC](#), [Wang IK](#), [Lee CH](#), [Chang HW](#), [Chiou TT](#), [Lee CT](#), [Fang JT](#), [Wu MS](#), [Hsu KT](#), [Yang CC](#), [Wang PH](#), [Chuang FR](#).

Division of Nephrology, Chang Gung Memorial Hospital, Kaohsiung Medical Center, Kaohsiung, Taiwan.

Vascular access thrombosis (VAT) is an important cause of morbidity for chronic haemodialysis (HD) patients. Some risk factors for VAT have been well-defined for chronic HD patients from western countries. However, only a few such factors have been confirmed for Taiwanese patients. This study attempted to determine the association between hyperhomocysteinaemia and the incidence of VAT for chronic HD patients in Taiwan. We retrospectively enrolled a total of 196 patients into this study during 2003. The patients were separated into VAT (n = 142) and control (n = 54) group. The participants of the VAT group were identified as those having one or more VAT, and the participants of the control group were those with no VAT in the past. The mean follow-up period was 48 months. The mean serum homocysteine levels were 29.5 +/- 9.6 and 29.1 +/- 9.5 micromol/l for the VAT (n = 142) and the control (n = 54) group, respectively. There was no significant difference in the level of homocysteine between the VAT and the control group (p = 0.70). Female chronic HD patients had significantly greater mean total homocysteine levels than male (30.89 micromol/l, 95% CI 28.84-32.94 vs. 28.06 micromol/l, 95% CI 26.32-29.82, respectively, p = 0.038). That synthetic graft was a significant risk factor for VAT was determined using multivariate logistic regression analysis. There was no association between serum total homocysteine levels and the incidence of VAT in chronic HD patients in Taiwan.

PMID: 16704682 [PubMed - indexed for MEDLINE]

C-reactive protein predicts vascular access thrombosis in hemodialysis patients.

[Chou CY](#), [Kuo HL](#), [Yung YF](#), [Liu YL](#), [Huang CC](#).

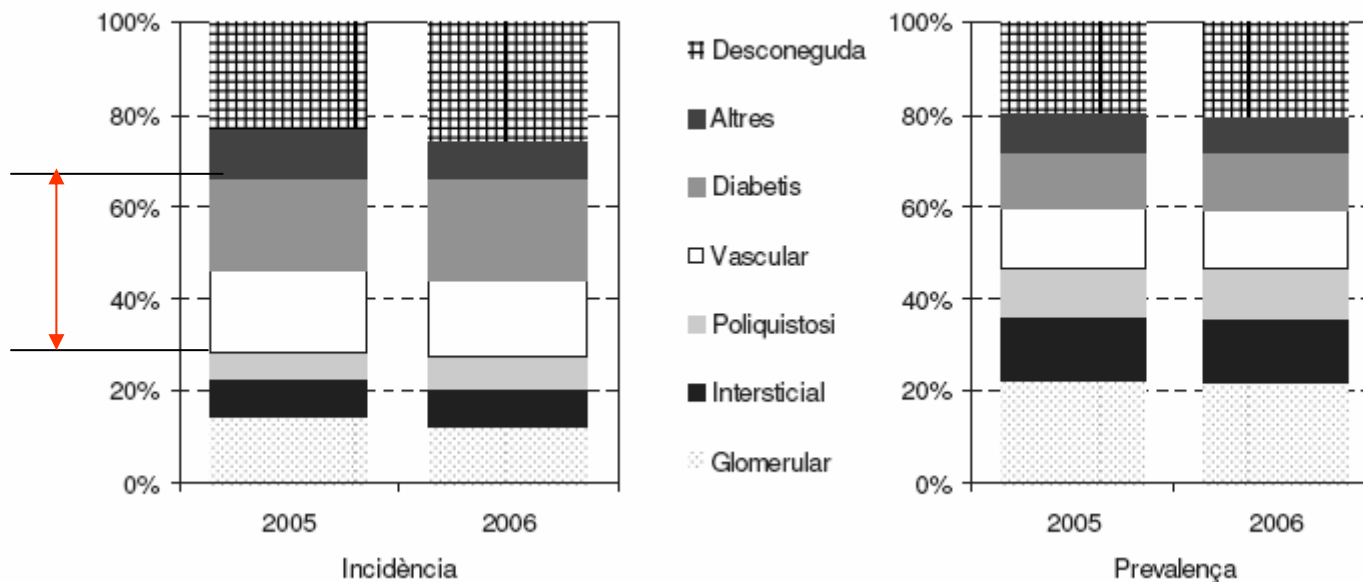
Division of Nephrology, Department of Internal Medicine, China Medical University Hospital, Taichung, Taiwan, ROC.

BACKGROUND: Vascular access thrombosis (VAT) is one of the most common morbidity in hemodialysis patients. The development of arteriovenous fistula thrombosis is associated with vascular intimal hyperplasia. Some studies suggested that serum C-reactive protein (CRP) predicts the development of vascular intima hyperplasia that conduces vascular access stenosis and thrombosis. This study aimed to assess the clinical usefulness of CRP in predicting VAT in hemodialysis patients. **METHODS:** We retrospectively reviewed all prevalent hemodialysis patients with native arteriovenous fistula (nAVF) between November 2001 and November 2004. The CRP levels and relation to the development of VAT was analyzed with Kaplan-Meier analysis in four groups of patients divided according to their serum CRP levels. Besides serum CRP levels, other factors possibly influencing vascular access thrombosis were also considered: gender, age, diabetes, aspirin, smoking, statin, serum albumin, hematocrit, cholesterol > 200 mg/dl, Calcium-phosphate product, and intact parathyroid hormone > 200 pg/ml. **RESULTS:** We retrospectively reviewed 223 chronic hemodialysis patients. 198 patients with forearm nAVF and 25 with upper arm nAVF were included. Of the above 223 patients, 51 experienced one or more VAT episodes. In Kaplan-Meier survival analysis, patients with serum CRP levels > 0.8 mg/dl were prone to develop VAT (log-rank, $p < 0.001$). In a multivariate Cox regression model, serum CRP greater than 0.8 mg/dl was confirmed to be an independent predictor of VAT with a relative risk of 16.6 times (95% CI, 7.85-35.1). The area under the receiver operator characteristic (ROC) curve of CRP > 0.8 mg/dl in predicting VAT events is 0.785 (95% CI, 0.712-0.858; $p < 0.001$). Sensitivity and specificity of CRP (> 0.8 mg/dl) in predicting VAT were 80.4 and 72.7%. **CONCLUSIONS:** The serum CRP levels not only predict cardiovascular disease and mortality in hemodialysis patients but also predict the development of vascular access thrombosis in chronic hemodialysis patients. Copyright 2006 S. Karger AG, Basel.

1: [Blood Purif.](#) 2006;24(4):342-6. Epub 2006 Apr 5.

Etiologia de MRP

Figura 10. Incidència i prevalença segons la malaltia renal primària. Anys 2005 i 2006.



Informe estadístic 2005-2006

**Registre de malalts
renals de Catalunya**

FAVIs fetes

Pacients als que se'ls fa una primera FAVI

Gener 2007 a Juny 2009

Seguiment i necessitat de nova FAVI i si hi te res a veure la Diabetis o la malaltia vascular fixant-nos en la pressió del pols.

Global

56 pacients

Edat : 69 a. 37-88 DesVest 13.36

Sexe 33 H 23 D 59/41 %

Diabetes mellitus 19/56 34%

Pressió de pols 66.6 DesVest 19.6

Grup 1 FAVI

42 pacients

Edat : 70.59 a. 37-88 DesVest 13.45

Sexe 25 H 17 D 59/41

Diabetes mellitus 13/42 31 %

Pressió de pols 64.38 DesVest 18.7

Grup > 1 FAVI

14 pacients

Edat : 68 a. 46-88 DesVest 13.41

Sexe 8 H 6 D 57/43%

Diabetes mellitus 6/14 42.8%

Pressió de pols 73.5 DesVest 21.68

Grup >2 favi

4 pacients

Edat : 70.7 a. 46-87 DesVest 17.64

Sexe  75/25 %

Diabetis mellitus 3/4  75%

Pressió de pols 81.5 DesVest 13.98

Pressió de pols

64.38  73.5  81.5

Diabetis

31  43  75

No hi ha diferències estadístiques

Conclusions

La favi **CONTINUA SENT EL MILLOR ACCÉS** per a HD, però la malaltia vascular afecta la seva creació, i en condiona a seva durada

La favi no permet un ús immediat quan es nova, si que en ocasions es pot punxar immediatament després d'una reparació.

Un nombre important de pacients en HD i com a part de la seva malaltia vascular tindran complicacions de l'accés vascular que no sempre es podran arreglar abans de la propera diàlisi i precisaran d'un o varis episodis de catèter central.

Continuarem necessitant els catèters centrals per als pacients crònics, per tant hem de treballar per solucionar i afrontar les seves complicacions .

Indiscutibles en el pacient agut i emergències.



Moltes
gràcies
per poder ser aquí parlant
..però sobre tot, per
haver-me escoltat