

## KSN 2017 Abstract

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### The Exchange Technique Using Previous Venotomy site Over the Guidewire from Non-tunneled to Tunneled Hemodialysis Catheter Can Be Performed without Compromising Catheter Long Term Patency

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**Objectives :** The exchange from non-tunneled HD catheter to tunneled one over the guidewire using previous venotomy does not require time for hemostasis for a new tunneled catheter insertion after its removal. It also does not require a new venipuncture so that it can prevent additional vessel wall injury. However, some concerns that it may be associated with the increased risk of infection and bleeding after procedure prevent its application. Therefore, we investigated its safety in our center.

**Methods :** From March in 2013 to February in 2017, 75 cases where the exchange from non-tunneled to tunneled catheter and 400 cases with de novo catheter placement were respectively assigned to exchange and de novo placement groups and these 2 groups were compared.

**Results :** Compared with the de novo placement group, the exchange group over the guidewire were younger ( $61 \pm 13$  years vs.  $66 \pm 14$  years;  $p = 0.03$ ), had a lower platelet count ( $143680 \pm 103400$  mm<sup>-3</sup> vs.  $216530 \pm 101810$  mm<sup>-3</sup>;  $p = 0.03$ ), the lower incidence of DM (36.5% vs. 57.5%;  $p = 0.02$ ), more AKI rather than ESRD as a cause of catheter insertion (43.0% vs. 24.2%;  $p = 0.01$ ). The immediate complication rate including suturing at exit site for bleeding control was higher in the exchange group (18.2% vs. 7.5%;  $p = 0.01$ ), but the late complication rate including infection and catheter dysfunction was higher in the de novo placement group (18.5% vs. 9.2%;  $p = 0.04$ ). The catheter survival rates between two groups were comparable ( $p = 0.42$ ). Multivariate Cox regression analysis for catheter survival showed the development of late complication was the only risk factor (odds ratio [OR] 1.575, 95% confidence interval [CI]: 1.125–2.319;  $p = 0.025$ ) rather than the exchange procedure (OR 1.625, 95% CI: 0.990–2.854;  $p = 0.06$ ).

**Conclusions :** The exchange over the guidewire from non-tunneled to tunneled catheter was not associated with the development of late complication compared with the de novo placement and does not affect catheter survival.

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Therefore, this technique should be positively considered and performed when the catheter replacement of non-tunneled catheter with tunneled one is required.

**Keywords :** Catheter, exchange, hemodialysis, over the guidewire