

“We have succeeded in establishing the rabbit model for peripherally inserted central catheter, and provided a new way for nursing teaching and training.”

Reference:

Zhang, J., Yin, W., Jiang, Y. and Juan, S. (2014) The establishment and evaluation of rabbit model for peripherally inserted central catheter. *Acta Cirúrgica Brasileira*. 29(8), p.493-8.

Establishment of a rabbit model for PICC placement [@ivteam #ivteam](http://ctt.ec/d0l5o+)

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Abstract:

PURPOSE: To establish a model to simulate the clinical specific process of peripherally inserted central catheter (PICC) on rabbits, and detect how long the catheter can be indwelled.

METHODS: Seventeen healthy New Zealand white rabbits were inserted the PICC according to the clinical specific procedure. With the principle of random, the rabbits were divided into four groups (14d, 21d, 28d, 35d). Each group contains four rabbits, and Group 1 was served as blank control group. When finishing the experiment, we took the blood vessels which was inserted the catheter and observed the changes of vascular endothelium using the Hematoxylin-Eosin (HE) staining.

RESULTS: 90% animals were succeeded in inserting PICC. Early signs of endovascular inflammation were predominantly neutrophils, then mainly monocytes, visible fibrous tissue hyperplasia of the vessel wall, vascular endothelial proliferation and granuloma formation. And after that the irreversible changes in the blood vessels could be observed, especially five weeks after catheterization.

CONCLUSIONS: We have succeeded in establishing the rabbit model for peripherally inserted central catheter, and provided a new way for nursing teaching and training. Since the irreversible changes of the vascular endothelium, it is recommended that the time of indwelling is not more than five weeks on animal.



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