

This study aimed to examine the influence of oral acetylsalicylic acid on blood fluidity and infusion speed in the cancer patients with Peripherally Inserted Central Catheter (PICC)” Ma et al (2016).

Abstract:

OBJECTIVE: This study aimed to examine the influence of oral acetylsalicylic acid on blood fluidity and infusion speed in the cancer patients with Peripherally Inserted Central Catheter (PICC).

BACKGROUND: PICC is placed for prolonged chemotherapy of cancer patients. The fibrin sheaths, which consist of cellular substance and non-cellular substance, generate at the place of insertion and grow down all over the catheter. Finally they cover the vent of the catheter and lead to catheter dysfunctions such as the decrease of infusion speed. In addition, the high viscosity status of cancer patients could lead to acute embolization, which adds to the high risk of death.

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DESIGN: Randomized controlled trial.

METHODS: This research was carried out between April 2013 and January 2014 in the second hospital of Xiangya, Central South University in Changsha, China. Initially 96 cancer participants with PICC were chosen and randomly allocated to experimental and control group. The participants of the experimental group were conducted route PICC maintain technique and took acetylsalicylic acid 100mg per day after dinner, while the control group received route PICC maintain technique only. The infusion speed and hemorheology indexes of the two groups were tested before our study and at the end of the 2nd and 4th months with several instruments.

RESULTS: Repeated measures analysis of variance indicated that taking acetylsalicylic acid orally had significant main effect on high shear blood viscosity and red blood cell

deformability index ($P < 0.05$), and it also had significant main effect as well as time effect on plasma viscosity ($P < 0.05$); and time had significant main effect as well as interaction effect with oral acetylsalicylic acid on low shear blood viscosity and red blood cell aggregation index ($P < 0.05$). Repeated measures ANOVA also showed that taking acetylsalicylic acid orally had significant main effect, time effect and interaction effect on infusion speed ($P < 0.01$).

CONCLUSION: Oral acetylsalicylic acid could improve hemorheology condition and the infusion speed related to fibrin sheath in the cancer patients.

Reference:

Ma, L., Xia, C., Sun, X., Zuo, Y. and Zhao, L. (2016) The effects of oral acetylsalicylic acid on blood fluidity and infusion speed in the cancer patients with PICC. *Clinical Hemorheology and Microcirculation* May 30th. 2016 May 30. .

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