

# International Conference on Pediatrics & Gynecology

## Catheter-related Infection and pathogens of umbilical venous catheterization in a neonatal intensive care unit in China

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Umbilical Venous Catheterization (UVC) is used in care for critically ill newborns in cases of limited peripheral venous access. Controlling UVC-related infection is important in controlling nosocomial infection in neonatal intensive care unit (NICU). In terms of choosing antibiotics, it is essential for neonatologists to have a strong command of the pathogen spectrum in the respective geographical region. In order to study the incidence of UVC related infection and pathogens in a NICU, a total of 516 patients were enrolled in this study (285 with UVC, and 231 without UVC). Patients were grouped into <2000g UVC or non-UVC groups,  $\geq 2001$ g UVC or non UVC groups. Blood culture and umbilical root skin swab culture were taken following UVC insertion and extraction. UVCs were removed after 7 days and cultures of UVC tips were performed then. The incidence of UVC-related septicemia was 9.5%. The incidence of UVC-related septicemia per 1000 UVC days was 13.6. No significant difference was noted between <2000g UVC and non-UVC groups, and between  $\geq 2001$ g UVC group and non-UVC groups, in the number of positive blood cultures and skin cultures, the percentage of catheter-related septicemia, the incidence of catheter-related septicemia per 1000 catheter days, and the increase in the number of positive cultures between two skin cultures following UVC insertion and extraction. The predominant pathogen in all cultures was gram-positive pathogens. Coagulase-negative *staphylococcus* was the most frequently noted pathogen. Therefore, UVC did not increase the incidence of catheter-related infection in NICU. It is necessary to consider local pathogen spectrum when choosing antibiotic therapy prior to specific culture results become available.

### Biography

Mingyan Hei graduated from Xiangya Medical School of Central South University in China in 1992. She got her Master of Philosophy Degree in Faculty of Medicine, the University of Hong Kong, and got her Doctor of Medicine degree from the Central South University. She has been trained as clinical fellow in NICU of Queen Mary Hospital in Hong Kong, and in NICU of Mount Sinai Hospital in Toronto. She has published more than 20 papers in both reputed Chinese journals and SCI journals. She is now the director of NICU, the Third Xiangya Hospital of Central South University.