

Urine Culture Contamination Among Infants

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Objectives: Urine culture and sensitivity (C&S) is an important test to support the diagnosis of urinary tract infection. However, it is easily contaminated during handling the specimen. A contaminated urine culture is defined as the presence of more than one isolation at greater than or equal to 100 000 CFU/mL. 40% is the standard contamination rate for this study. The aim of this study is to reduce the contamination rate of urine culture among infants in the health clinics under Kota Bharu district, to identify the contributing factors and to provide strategic intervention to overcome the problem.

Methods: A cross-sectional study comparing pre- and post-intervention was conducted in 2019. Data were collected from the questionnaires, laboratory information system (LIS) named 'Sistem Informasi Makmal Kesihatan Awam (SIMKA)' and urine C&S laboratory form. A total of 40 validated questionnaires were given randomly to the clinic staff at 10 health clinics. Data were analysed and interventions were performed to tackle the problem. Continuous medical education (CME) on proper procedure in urine C & S and the practical session on 'Bladder Stimulation Technique' as an alternative way in clean catch urine method were done at selected health clinics. CDs, posters, and flyers on the standard procedure of urine C&S also had been distributed to all health clinics in Kelantan.

Results. Post-intervention, the urine contamination rate slightly reduced from 59.6% to 52.5% which was still higher than the standard (<40%). In general, the percentage of good practice increased for urine collection, storage and transportation. The level of knowledge for the category 'poor' was reduced from 5% to zero. The use of clean catch urine as the preferred method for the collection of urine also increased from 17.5% to 32.5%.

Conclusion. Continuous monitoring of urine culture contamination and sustaining the remedial measures are very important to control the problem. There is room for improvement to reduce the contamination rate of urine culture among infants for samples received in Kota Bharu Public Health Laboratory.

Keywords: urine culture contamination, urine C&S, infants, clean catch urine

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