
COMPREHENSIVE NURSING OF ECMO ASSISTED FLOW DYNAMICS MONITORING UNDER EVIDENCE-BASED NURSING PRACTICE

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Background and Aims

To explore a comprehensive nursing strategy for hemodynamic monitoring during extracorporeal membrane oxygenation (ECMO) assisted period in evidence-based nursing practice, in order to improve the treatment efficiency of critically ill patients.

Methods

The system searched UpToDate, Cochrane Library, JBI Evidence Based Healthcare Database, and PubMed (2010-2025), used AGREE II tool to evaluate guideline evidence, and combined with the ECMO nursing expert consensus of the Chinese Nursing Association, developed a nursing process that includes three core elements: standardized monitoring techniques, complication warning, and team collaboration. Systematically evaluate the hemodynamic characteristics of ECMO patients and the limitations of monitoring techniques, and construct a multidimensional nursing intervention plan.

Results

Standardized nursing significantly reduced ECMO related hypoperfusion events (by 30%) ($p < 0.01$), improved the accuracy of hemodynamic parameter collection in ECMO patients ($p < 0.01$), and reduced the incidence of catheter-related thrombosis ($OR = 0.42$, 95% CI 0.31-0.57), verifying the synergistic effect of precise hemodynamic monitoring and comprehensive nursing.

Conclusion

The evidence-based ECMO nursing system can optimize hemodynamic management and provide individualized and precise nursing support for critically ill patients. In the future, multi center research needs to be deepened to improve the evidence chain.

Keywords: Evidence based nursing, ECMO