Monitoring Peripheral Perfusion in Critically Ill Patients at the Bedside.
van Genderen M.E., van Bommel J., Lima A. *Curr Opin Crit Care* 2012, 18:273–279.

Introduction

The goal of circulatory monitoring is the use of an accurate, continuous and noninvasive method that can easily assess tissue perfusion under clinical conditions. As peripheral tissues are sensitive to alterations in perfusion, the noninvasive monitoring of peripheral circulation could be used as an early marker of systemic haemodynamic derangement. We, therefore, aim to discuss the currently available methods that can be used at the bedside as well as the role of peripheral perfusion monitoring in critically ill patients.

Recent findings

The deterioration of peripheral circulation has frequently been observed in critically ill patients with the use of subjective assessment and several optical techniques. In various patient categories, more severe and persistent alterations have been associated with worse outcomes, and these associations were independent of systemic haemodynamic parameters. Interventions aimed at systemic parameters have an unpredictable effect on peripheral circulation parameters, especially during hyperdynamic conditions. Thus, it appears that changes in peripheral perfusion reflect changes in regional vasomotor tone rather than systemic blood flow

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Summary

Subjective assessments and optical techniques provide important information regarding peripheral circulation. Moreover, these techniques are relatively easy to implement and interpret at the bedside and can be applied during acute conditions. Further research is warranted to investigate the effects of therapeutic interventions on peripheral perfusion parameters and patient outcome.