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Abstract

Objective: To establish a simple, stable method for measuring total complement activity in plasma. **Methods:** Total complement activity (TCA) of plasma was measured using a classical method (CH50 method) and a self-hemolysis colorimetric method (new method). Human red blood cells (RBC) were used as a hemolysis indicator system and rabbit-anti-human RBC antibody instead of the traditional hemolysin (rabbit-anti-sheep RBC antibody) in the new method. TCA in intensive care unit (ICU) patients and healthy individuals was measured using the new method. **Results:** TCA using the new method and the CH50 method was significantly correlated. TCA in ICU patients was significantly lower than that in healthy individuals. **Conclusion:** The self-hemolysis colorimetric method is a simple and stable method, and has potential value in clinical applications.

Key words: complement hemolysis system red blood cell