High serum levels of fatty acid-binding protein 7 in diabetic rats with experimental sepsis

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Objective: Sepsis is a disease that affects a wide variety of individuals, including the young, the elderly, and those admitted to the hospital with diverse acute or chronic conditions. Because sepsis is such a heterogeneous disease, some researchers believe that personalized medicine may represent a promising means of improving the prognosis for certain patients. Of those who develop sepsis, diabetic patients remain a significant proportion, because diabetes is a metabolic disorder that is associated with disturbances in the immune system, which facilitates bacterial infections. Fatty acid-binding proteins (FABPs) are a family of transport proteins with an important role in metabolism; therefore, we decided to measure their levels in diabetic rats, as part of a search for a novel biomarker of sepsis. Methods: Diabetes was experimentally induced in male Wistar rats, some of which then underwent cecal ligation and puncture, and the levels of FABP4 and 7 were measured in their serum and key tissues. Results: Serum FABP7 levels in diabetic septic rats were significantly higher than in non-diabetic septic rats. Conclusion: Consequently, we propose that FABP7 should be further investigated as a potential biomarker of sepsis in diabetic patients.