Dear Editor;

Diabetic ketoacidosis (DKA) is an important hyperglycemic complication of diabetes mellitus. Infection is confirmed as an important underlying etiology of DKA. Here, the author presents an interesting case of dengue preceding DKA. The case is a 61-year-old female presenting to the physician with the complaint of high fever without relief by self-prescription of acetaminophen. She had an underlying disease, diabetes mellitus (DM). Her body temperature was 39.4 degrees Celsius and her complete blood count showed an important finding: thrombocytopenia (platelet count = 85,000). The serological test was done and the diagnosis of dengue hemorrhagic fever was finally confirmed. This case was treated by standard fluid replacement therapy (normal saline regimen). On day 3, the patient developed new symptoms, frequent urination (more than 3 times in an hour, abdominal pain, nausea, vomiting and rapid breathing). Complete blood count was done but platelet count was within normal limit at this time. However, the urinalysis showed many positive findings, sugar 4+ and ketone 3+. Her additional blood chemistry results showed a blood glucose level of 454 mg/dL and positive serum ketone. The patient was finally diagnosed to have DKA and endocrinologists were consulted for the management. Of interest, this is a simple case of DKA but the interesting issue is the underlying condition leading to DKA in this patient. Although there are many reports confirming that infection can induce DKA, this is the first reported case of dengue preceding DKA. Indeed, there is a previous report from Thailand on a female patient presented to the physician with concurrent DKA and dengue infection (1). However, DM had not previously been diagnosed in the present case. The dengue infection is common in the tropical world and DM is also the important emerging health problem in this area. Some reports note that DM can be an aggravating factor in the development of dengue shock (2,3). There is an interesting report stating that patients suffering from dengue fever should be cautioned for development of diabetes in future (4). However, dengue has rarely been mentioned as a risk factor in the development of DKA. Based on the present situation that DM is a very common problem, testing blood glucose during the management of dengue infection is useful (4). The concern on the diabetic complications such as DKA should also be kept in mind in the treatment of patients suffering from dengue. Moreover, it should be noted that not only bacterial but also viral infections (such as dengue, herpes, etc.) can induce DKA (1,5). The good example is a previous report on herpes simplex virus infection inducing DKA (5).

Key words: Dengue, diabetic ketoacidosis

References