Clinical Characteristics of Hospitalized Diabetes Patients with Hypoglycemia in Siriraj Hospital

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Background: Hypoglycemia is one of the most important emergency complications in diabetes patients, which can be caused by various factors. The consequences of these complications lead to patient’s morbidity and mortality.

Objective: To study clinical characteristics of severe hypoglycemia in hospitalized diabetes patients in Siriraj hospital.

Methods: We conducted a descriptive cross-sectional study which included hospitalized diabetes patients with severe hypoglycemia in internal medicine ward from August 2011 to December 2017. Data between August 2011 and August 2015 were collected by retrospective medical record review.

Results: A total of 99 hospitalized diabetes patients were analyzed. There were 40 male patients (40.4%). The mean age was 71.58±11.62 years. None of them was type 1 diabetes. The most common presentation was alteration of consciousness (85.9%). The capillary blood glucose was 14-73 mg/dl (38.68±3.74) and venous blood glucose was 14-63 mg/dl (33.72±10.79). The treatment by intravenous glucose injection and continuous drip were 89.9% and 92.9%, respectively. There was 99% improvement after glucose administration. The most common anti-hyperglycemic agents were oral sulfonylurea (64.6%), glipizide (64.1%), and glibenclamide (20.3%). While, insulin injection was 36.4% and combination usage both sulfonylurea and insulin injection was 9.1%. The causes of severe hypoglycemia were patient’s poor intake (60.6%) and infection at any site (41.4%) including urinary tract infection (39.1%) and acute gastroenteritis (24.4%). The duration of admission during 4-7 days was 51.5%. Approximately 93.9% of the patients were complete recovery after admission, while 5.1% died by any causes. During 1 year after the event, 80.8% of the patients were alive, while 13.1% died and the rest were transferred to their home town or loss to follow up.

Conclusion: The majority of hospitalized diabetes patients with severe hypoglycemia in Siriraj hospital present with alteration of consciousness. The average capillary blood glucose is 38.68 +/- 13.74 gm/dl. The common causes of severe hypoglycemia include poor food intake and infections. In addition, other contributing causes could be recent adjusted medications by physicians. Nonetheless, most of them are preventable causes. Hence, education for diabetes patients is very important and it should be encouraged to prevent and reduce the occurrence of severe hypoglycemia.

Keywords: Severe hypoglycemia, Diabetes patient, Hospitalized, Siriraj hospital