

Editorial

Dengue and Diabetes Mellitus: Interrelationship

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EDITORIAL

Diabetes mellitus (DM) is the abnormal endocrine disorder presenting with abnormal glucose metabolism [1,2]. The patient with DM generally has abnormal high blood glucose level and this is the basic problem that results in several complication of hyperglycemia. The vascular disorder as complication of DM is a big concern and it can result in fatal condition (such as acute cardiac event) [3]. At present, DM is the most common chronic disorder seen in any medical center and there are numerous patients with DM around the world. The pathogenesis of DM is complex and the interrelationship with other common medical disorders is very interesting.

Here, I would like to draw attention and discuss on the interrelationship between DM and dengue, a tropical mosquito borne arbovirus infection [4]. Dengue can cause acute febrile illness and can induce hemorrhagic complication. The well-known severe form of dengue is dengue hemorrhagic fever (DHF) with might further result in shock [4]. Dengue is highly prevalent in tropical countries especially for those poor developing countries in Asia [5]. Of interest, in the endemic area of dengue, the high prevalence of DM can also be observed. Hence, the concurrence between the two disorders is possible. First, it should note that DM can be the underlying problem that superimposes the clinical problem due to dengue. According to a recent meta-analysis, et al. found that “suffering from diabetes mellitus” was an important risk factor for “for dengue infection, DHF and mortality [6]” Wei et al. also found the similar finding [7]. Having underlying DM is also found to be important factor leading to complications during dengue infection including to renal problem [8] and hemorrhagic episode [9]. Baig et al., concluded that “metabolic factors especially diabetes with and without hypertension are important risk factors for the development of DHF [10]”. According to the mentioned data, it is no doubt that DM patients with dengue have to be carefully managed. In addition, when practitioner manage dengue patient, looking for the possible hidden underlying DM is needed. Second, whether the dengue virus can induce DM is another interesting question. Until present, this question has never been answered and there has never study to clarify this myth. Nevertheless, the immunological problem due to the previous virus infection is possible and can be the underlying etiology of several autoimmune problems including to DM type 1 [11]. In conclusion, it can be seen that there is the interrelationship between dengue and DM. One disorder might affect each other. As noted by Kalra et al., “With increasing the prevalence of diabetes and prediabetes across the globe, a large number of patients with acute febrile illness (AFI)

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are likely to have concomitant diabetes or stress hyperglycemia. Management of associated hyperglycemia in patients with AFI is of utmost importance for early recovery and to prevent complications [12]”.

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