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Complete heart block due to diphtheritic myocarditis

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Dear editor,

The problem on complete heart block due to diphtheritic myocarditis is very interesting. Recently, Varghese *et al.* reported on a case series of diphtheritic patients with myocarditis[1]. Indeed, diphtheria is an old bacterial infection that is rarely detected at present. The diphtheria vaccination plays an important role in the disease control. However, in some developing countries, the problem can still be detected and the presentation of diphtheria might not be well recognized by general practitioners. Focusing on cardiac presentation of diphtheria, myocarditis can be seen in severe cases[2–7]. In addition, constrictive pericarditis can be seen and might be complicated by pyopericardium[8]. For sure, the cardiac block in cases disturbed by diphtheria can be expected. To add on the knowledge, the local situation from Thailand, a tropical country in Thailand, will be further discussed. Focusing on a previous Thai report on diphtheria, of 99 reported cases, myocarditis was the most common organ disorder (about 14%) following by pneumonia (about 10%)[9]. The rate of myocarditis were also similarly reported in the Thai publication[10,11]. Focusing on the electrocardiography abnormality, the abnormality was reported in 26% of infected cases[11]. The electrocardiography disorders included 1st degree auriculo-ventricular block, ST-T change, intraventricular block and major conduction disturbance[11]. Of those electrocardiography disorders, major conductive disorder had the worst prognosis[12]. Additionally, from echocardiographic study, the cases with major conductive disorder had the significant percent fractional shortening comparing to the other groups[12]. However, not all diphtheria cases are in toxigenic form. Sometimes, the non-toxigenic form can be seen and it can also cause cardiac disorder as endocarditis[13]. Managing the patients with diagnosis of diphtheria, complete cardiac assessment is needed. Sometimes, the cardiac involvement is occulted and masked by uncommon presentation such as skin ulcer[14]. On the other hand, the possibility of diphtheria must be kept in mind when practitioner deals with cases with cardiac problem. Finally, it should also be noted that there is also report of diphtheria cardiac disorder as vaccination adverse effect[15].

Conflict of interest statement

We declare that we have no conflict of interest.

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