

中文題目：流感疫苗與微小病變腎病

英文題目：Influenza Vaccination and Minimal Change Disease

作者：周逸峰<sup>1</sup> 徐永勳<sup>1,2</sup> 張鈞鎧<sup>3</sup>

服務單位：台北市立聯合醫院仁愛院區<sup>1</sup>一般內科；<sup>2</sup>腎臟科；<sup>3</sup>內分泌及新陳代謝科

### **Back ground:**

Influenza vaccination is the mainstay of preventing outbreaks and epidemics of seasonal influenza. Previous studies showed the benefits to decrease risks of influenza-related morbidity and mortality, including pneumonia, cardiovascular events and acute kidney injury among the elderly. Also, the safety of vaccines is a critical factor to maintain national vaccination programs. Many cases of auto-immune diseases like Guillain-Barré syndrome after influenza vaccination were reported; however, renal complication such as nephrotic syndrome was rarely mentioned before. Here we present a case who developed minimal change disease after vaccination.

### **Case presentation:**

A 75-year-old man had the history of subtotal thyroidectomy due to thyroid nodular goiter, atrial fibrillation with slow ventricular rate status post permanent pacemaker implantation, angina pectoris, hypertension, and type 2 diabetes mellitus. His laboratory data two months ago showed no proteinuria (urine albumin to creatinine ratio (UACR): 9.5 mg/g), good glycemic control (HbA1C:6.2%) as well as normal renal function (Creatinine:0.9 mg/dL). Eleven days before presentation, he had received influenza vaccination and felt weakness afterward. Four days before admission, lower legs and scrotum edema developed and worsened progressively. Hence, he was admitted for further study. At admission, the serum creatinine was 1.4 mg/dL and the serum albumin was 2.1 g/dL. Total cholesterol was 237 mg/dL. The collected 24 hours urine protein was 8636 mg/day. Work-up for secondary causes of the nephrotic syndrome were all negative, hence ultrasound-guided renal biopsy was arranged. Pathology report showed extensive (global) podocyte foot process effacement with microvillous degeneration, which was compatible with minimal change disease. Therefore, therapy with oral prednisone dosing as 1.0 mg/KgW was started. After fourteen days of therapy, the proteinuria resolved (UPCR: 118 mg/g). The serum albumin returned to 3.7 g/dL after 9 weeks.

### **Conclusion:**

This report describes a case of minimal change disease associated with influenza vaccination which might resulted from hyperstimulation of the immune system. The benefits of vaccination in the elderly are clear, and this report should not alter current practice. However, we must keep in mind that no vaccine is completely safe, and the host susceptibility such as

age and comorbidities should also be considered. The immune reaction after vaccination is noteworthy and needed further study.

關鍵字：influenza vaccination, minimal change disease