

## 糖尿病治療趨勢與臨床用藥考量

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Anti-diabetic medications of oral and injected pattern were developed for more than many decades. Efficacy of glycemic control was always emphasized until UDGP and UKPDS study. Early intervention with consideration of drug safety issues was discussed after completing above studies. Biguanides was firstly discussed due to the possible lactic acidosis and limitation in renal insufficiency, and sulfonylurea was later mentioned about its hypoglycemic potential and risk, but prominent glucose lowering efficacy. TZD was developed since early 1990's, but the issue of probable cardiovascular risk or bladder cancer was preliminarily clarified until 2013 and 2014, respectively. Recently, two new categories of anti-diabetic medications were delicately evaluated, including DPP-4 inhibitors and SGLT-2 inhibitors. The non-inferiority study of DPP-4 inhibitors, such as SAVOR, EXAMINE, and TECOS, established the safety issues of this new category, however, heart failure issue was still under further observed after SAVOR study. On the other hand, empagliflozin, one of the SGLT-2 inhibitors, completed EMPA-REG study to prove SGLT-2 inhibitors could statistically reduced cardiovascular mortality and heart failure with uncertain mechanism. However, SGLT-2 inhibitors seem to play the pivotal roles in the future for cardiorenal complications. Nowadays, physicians are so lucky having so many effective medications. Insulin and long acting GLP-1 medication are both important therapies for diabetic patients, and needle phobia should be considered with good adherence. Therefore, more information should be provided not only patients but medical providers. Finally, how choosing the correct medications for the right T2DM patients could be more clarified in the near future.