

Treatment using a combination of oral anti-hyperglycemic agents in type 2 diabetes mellitus

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Abstrak

Up to this moment, there are various oral anti-hyperglycemic (OAH) known, such as the insulin secretagogue group of drugs, which in essence aims to increase insulin secretion by (J) pancreatic cells, and the group of drugs that increases tissue sensitivity to insulin. Administration of a single drug from one of these two groups will eventually fail to achieve euglycemic control level. Instead, a combination of two kinds of OAH with different mechanism of action has been proven to significantly achieve glycemic control compared to administration of a single agent. In addition to reducing side effects, administration of a combination of two kinds of OAH can also postpone the need for insulin, which is generally disliked by patients. Sulphonylurea and metformin are among the most common drugs to be combined, but other combinations could also produce the same satisfactory effect. Combination of sulphonylurea and troglitazone does not produce expected euglycemic effect, even though it can reduce the HbA_{1c}-level.

Administration of 3 types of OAH is not advisable, since generally, a combination of 2 kinds of drugs at maximum dose could no longer achieve glycemic control, even with the addition of another OAH. In addition to more side effects and higher cost, such treatment is not practical, and insulin secretion by beta cells generally can no longer be increased. Patients that fail to demonstrate satisfactory results with a combination of 2 types of OAH are advised to be treated with moderate-acting insulin at night as an additional treatment, with a dose titrated to achieve euglycemic control. Patients receiving single treatment that could not achieve euglycemic control may receive combined treatment before reaching the maximum dose, since at maximum dose, there is generally more side-effects.