

Safety is paramount: treating chronic disease

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Abstract

The increasing burden of morbidity, the high prevalence of metabolic diseases such as diabetes mellitus, hypertension, and coronary artery disease, the availability of multiple pharmacological interventions, and the frequent use of complementary and alternative medicine have all contributed to an enhanced use of polypharmacy in geriatric patients.

The higher susceptibility of elderly individuals to drug related adverse events, a greater chance of drug interactions, and increased prevalence of hepatic and renal dysfunction in them, make drug safety an important concern in geriatrics.

This is especially true for geriatric diabetes care, where avoidance of hypoglycemia and other adverse events, patient tolerability and satisfaction are as important therapeutic endpoints as efficacy of drugs.

The recent controversy regarding the cardiovascular effects of rosiglitazone has focused the spotlight on the safety and appropriateness of various antidiabetic medications. The fact that the vote at a US FDA advisory board meeting was nearly equally split, in favour of, and against, rosiglitazone, highlights the fact there is no consensus regarding management of diabetes.

Conflicting data from large outcome studies such as ACCORD and ADVANCE also underscore the fact that more research is needed to firmly delineate optimal methods and strategies for diabetes care.

While these, and other, controversies continue, a few basic principles of medical care can go a long way in improving the health, and reducing the burden of drug-related adverse events, in geriatric patients requiring therapy.

Using low doses, planning a slow upward titration, and avoiding use of multiple drugs, while considering possible drug interactions, are principles which planning therapy for elderly individuals with diabetes.

Amongst the secretagogues, one should prefer short acting molecules such as glipizide and repaglinide, and avoid the more potent drugs like glibenclamide.

Sensitizers should be administered in low doses. One should always be cautious about metformin, and assess renal and hepatic function prior to prescribing this, or other drugs.

A serum creatinine of ≥ 1.5 mg % in men and ≥ 1.4 mg % in women, or more accurately, a creatinine clearance of ≥ 60 ml/min, are contraindications for metformin therapy.

Alpha-glucosidase inhibitors like acarbose and voglibose, and dipeptyl peptidase (DPD)-4 inhibitors such as saxagliptin, sitagliptin and vildagliptin are considered safe in the geriatric age group.

The thiazolidinediones, specifically rosiglitazone, have come under a cloud because of safety issues, and should be avoided in the elderly, who are at higher risk of heart disease.

Modern insulins or insulin analogues are associated with a better safety and tolerability profile, offer greater flexibility of administration, do not need a specific meal-injection time gap, and are equally effective for glucose lowering, as compared to conventional insulins.

Modern insulins, whether used as a basal regime, a premixed regime or a basal-bolus regime, should be preferred in geriatric patients, as they offer the triple benefit of efficacy, safety, and tolerability.

Keeping these factors in mind while prescribing therapy to geriatric and other patients, with diabetes, will ensure that the burden of diabetes and treatment-related complications is minimized, while the outcome of therapy is optimized.

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References

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