

## Self-medication with herbal remedies amongst patients of type 2 diabetes mellitus: A preliminary study

Sir,

According to the International Diabetes Federation, Type 2 diabetes mellitus (T2DM) currently affects about 246 million people throughout the world and is expected to increase to 380 million by 2025. The long-term complications of the disease notwithstanding, many patients are prone to noncompliance of prescribed medications which mostly comprise various oral hypoglycemic agents (OHAs) and insulin. During the virtually life-long therapy, many a patients are tempted to look for “alternative” remedies to this disease. It is a general notion among the population that being natural, herbal remedies are totally safe. But this is a misbelief, since these remedies are seldom standardized and often are contaminated with harmful substances.<sup>[1]</sup> Moreover, they may be potentially dangerous to the patients due to adverse effects and interactions with prescribed drugs.<sup>[2]</sup>

This preliminary study was planned with the objective to study the consumption of herbal remedies in patients with T2DM in a tertiary care teaching hospital of North India and to assess the prescribers’ awareness about such herbal consumption by their patients.

One hundred consecutive patients were interviewed using a questionnaire and baseline parameters and detailed medication history was noted.

Out of the 100 patients, 91 were on drugs while 9 were

not taking any medicine for diabetes (diet and/or herbals alone). OHAs were prescribed to 64 of 91 patients (70.32%), either alone 31 (48.43%) or as combinations 22 (34.37%) or along with insulin 11 (17.18%). 27 out of 91 patients (29.67%) were prescribed insulin alone due to ineffectiveness of OHAs. Glimepride was the most commonly prescribed monotherapy [13 (41.93%)], followed by gliclazide [9 (24.03%)], while metformin was most common add-on drug [26/64 (40.62%)] in combination. Thiazolidinediones were least prescribed—pioglitazone 17.18% and rosiglitazone—nil. 45% patients were taking herbal remedies along with the prescribed drugs for diabetes. Among these, majority (36/45) were taking these on their own or after advice from family members or friends. Only 5% patients consulted an herbal specialist/ayurvedic doctor before starting these. In 98% of cases physicians were unaware of this fact. Only 1 patient out of 45 disclosed the information to the prescriber while none of the patients had ever been asked specifically about their herbal remedy consumption. Overall, 58% patients reported incidence of hypoglycemic symptoms which comprised light-headedness and giddiness, cold sweats, and excessive hunger-pang type feeling. However, no case of hypoglycemic coma was recorded. As compared to 19 (32.76%) patients taking OHAs alone, 39 (67.24%) patients taking OHAs and herbals concomitantly reported hypoglycemic symptoms. 23 of 45 (51.11%) patients consumed juice of *Charantia momordica* either alone or with other herbs. *C. momordica* juice was usually taken once a day in the morning and all the 7 patients consuming *C. momordica* juice along with OHAs reported hypoglycemic symptoms. *Aradichta indica* leaves (whole or crushed to form juice) were consumed by 16 of 45 (35.55%) patients, usually along with other herbals. Seeds of *Syzgium cumini*, dried and crushed to make a powder, were consumed by 14 of 45 (31.11%) patients in combination with other herbals. Other herbal remedies included *Gymnema sylvestrae*, *Vinea rosea*, and *Emblica officinalis*.

The use of herbal remedies and alternative medicine is constantly increasing throughout the world. A study published in *JAMA* showed that 14–16% of American adult population used herbal supplements concomitantly with prescribed medication.<sup>[3]</sup> Another study in Israel showed that 36% had used some type of complimentary medicine during the past year. Of these patients, 67% used herbal remedies and 49.5% used these remedies simultaneously with conventional medicine.<sup>[4]</sup> Another study results showed that herbal consumption was prevalent in 25% of patients hospitalized in internal medicine ward.<sup>[5]</sup> Thus, there is a general trend of increased consumption of herbal remedies in patients—alone or concomitantly with allopathic medicine.

This study highlights the high prevalence of herbal intake by patients of T2DM concomitantly with prescribed medication. The study results concur with the study by Giveon *et al.*<sup>[4]</sup> who reported 49.5% patient taking herbal remedies simultaneously with conventional medications. The low awareness level of prescribers with respect to this is comparable to those reported by Goldstein *et al.*<sup>[5]</sup> Similarly, other studies have shown that the lack of awareness about herbal remedies among the medical professionals is a point which needs attention.<sup>[6,7]</sup> There is a need to create awareness among the prescribers and patients regarding the dangers of concomitant intake of herbal remedies for diabetes. Further studies are required to look into this remedy-seeking behavior of patients so as to minimize self-medication while envisaging safety of long-term treatment of diabetes.

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