Currently available is ideal; management ends this. ‘Diet and lifestyle measures are often ineffective’, said Prof Mollentze. ‘However, we still don’t have the ideal agent that will normalise blood glucose, with minimal side effects, while preventing macro- and microvascular complications.’

Obesity in a diabetic seriously compounds the risk of various complications, especially cardiovascular disease. ‘Visceral fat is bad news’, said Dr Randeree, ‘and “diabesity” is associated with a seven-fold greater risk of death than diabetes alone. Weight loss is therefore very important – and the more loss, the greater the risk reduction.’ He did, however, point out the irony that many treatments for diabetes were associated with weight gain, making obesity a particular challenge in diabetics.

Smoking, like obesity, contributes significantly to a multiplication of risk and needs to be discouraged.

Dr Randeree concluded that there is a therapeutic gap that needs to be bridged, and that effective diabetes treatment requires multifactorial interventions that go beyond glycaemic measures. ‘We need to reach goals much sooner’, said Prof Mollentze. The current SEMDSA guidelines support this trend, recommending lifestyle interventions plus metformin as diagnosis at the first step in treating type 2 diabetes.

‘Lifestyle changes can be effective in improving diabetes control and cardiovascular risk, while reducing the use of medicine, but long-term success is limited, hence the recommendation of metformin. The maximum effective dose is 1 000 mg twice daily, but often 850 mg is sufficient and up-titration may be associated with side effects and reduced compliance, while not providing additional benefit.’

One in five patients fail on metformin monotherapy. The addition of glibenclamide is indicated in these patients because of its synergistic effects with metformin.

Step 2 recommends the introduction of a sulphonylurea or a basal insulin or pioglitazone (although the latter is not the preferred option). ‘It’s important to start at low doses, given these agents’ tendency to promote weight gain and induce hypoglycaemia. Continuing metformin therapy after the introduction of NPH insulin helps to address these concerns, while also providing superior glucose control.

Patients who self-monitor regularly have been shown to reduce their HbA1c, and consequently reduce their macrovascular risk by 14%. Prof Mollentze cautioned, however, that there is still a lack of consensus on the value of this and no study data on optimal testing frequency. ‘However, common sense suggests that patients should indeed self-monitor.’

Prof Mollentze summed up with 10 steps that should be followed in treating type 2 diabetes:

- aim for good glycaemic control
- monitor HbA1c, every three months
- manage dyslipidaemia, hyperglycaemia and hypertension aggressively
- refer newly diagnosed patients to specialist units
- address underlying pathophysiology
- treat aggressively to achieve HbA1c targets within six months
- if target is not reached at three months, consider combination therapy
- combination therapy should be introduced sooner rather than later
- when it comes to combinations of oral anti-diabetic agents, use ones with complementary mechanisms
- it is important to involve a multidisciplinary team in the patient’s care.

A primer of insulin therapy – when, why and how?

Prof MAK Omar, Durban

With time, oral antidiabetic agents stop working and diabetes control worsens as insulin secretion drops and beta-cell failure progresses. ‘Insulin sensitivity declines too’, said Prof MAK Omar, formerly of the Diabetes and Endocrinology Unit at the University of KwaZulu-Natal and now in private practice.

He posed the question, ‘Why is insulin usually introduced later?’ While patient resistance is an obvious answer, Prof Omar pointed out that physician resistance and inertia should not be discounted either. ‘Despite poor glucose control and non-response to oral diabetics, many doctors still follow the recommendation of the DAWN study not to introduce insulin “until absolutely essential”’, he said. ‘But one should not delay, as insulin may be a saviour in terms of preventing complications.’

Prof Omar noted that there are four possible regimens:

- bedtime basal insulin combined with oral antidiabetics
- biphasic insulin twice daily
- a basal/bolus regimen
- an insulin pump.

Option one works best when fasting glucose is high – and the analogues are preferable to NPH because they’re relatively ‘peakless’, ensuring a consistent level during the day. They also have the advantage of once-daily dosing, a lower risk of hypoglycaemia and a safety profile comparable to that of NPH.

Biphasic insulin may be required if this approach does not work, and if that still doesn’t bring patients to target, a basal/bolus regimen may be required to suppress hepatic function at night and normalise post-prandial glucose levels. Prof Omar underscored that numerous analyses have refuted earlier findings that the basal insulin analogue, glargine, is associated with an increased risk of malignancy. Doctors therefore have no reason not to prescribe it.

‘With insulin, the sky’s the limit, and we can drop HbA1c as low as we wish. So don’t delay. Which regimen is chosen should be individualised to the patient in question.’

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