

# EDITORIAL

## Diabetes in prisons: Improving its management

Type 2 diabetes is the chronic disease with the most important progression throughout recent years and it has become the great epidemic of the 21st century. We know that it currently affects 14%<sup>1</sup> of adults in Spain, that its incidence increases with age, affecting 30% of adults over 60 years old and that its development depends of both genetic and environmental factors.

We therefore can expect a high percentage of individuals hosted in correctional facilities having type 2 diabetes and many developing the disease during their stay, due to an ageing correctional population and the prevalence of obesity among inmates, both factors leading to a higher risk of developing the disease<sup>1</sup>. On the other hand, this population has some specific features which lead to a higher probability of developing the disease such as potential reduced physical activity, a high prevalence of infectious diseases such as AIDS<sup>2</sup> or the use of psychotropic drugs.<sup>3</sup>

The main goal when dealing with diabetes is preventing its long-term complications such as cardiovascular disease, the loss of eyesight and renal impairment. In order to do so, optimal long-term metabolic control must be achieved although the first step is early diagnosis and treatment. It is therefore of paramount importance to obtain a thorough clinical record and carry on appropriate physical and analytical examinations to inmates upon imprisonment assessing potential complications and cardiovascular risk among those who have already been diagnosed<sup>4</sup>, and making initial diagnosis in other cases.

After the identification of patients they must immediately begin appropriate medical treatment and optimal continued nutritional monitoring as to avoid the incidence of hypo and hyperglycemia.

The management of diabetes among inmates should follow the same standards as the rest of the general population, regarding therapeutic schemes and control parameters. It is also essential to establish an individualized treatment and control plan according to the age, comorbidity and features of each patient, according to the recommendations of current clinical guidelines.<sup>5</sup>

Control objectives must be the same as those of the general population with glycated hemoglobin levels under 7%, although objectives must be tailored according to the individual features of each patient, especially according to age<sup>6</sup> and reconsidering less strict objectives in old multi-pathological patients.

Lifestyle modification is the most important part of treatment in every case and therefore specific nutritional needs must be assessed avoiding weight gain and physical inactivity, encouraging aerobic and resistance exercise among these patients.<sup>7</sup>

Along with lifestyle modification, metformin has been consolidated as the first-line drug for all patients with type 2 diabetes after proving its cardiovascular benefit and lack of relevant side-effects. Nevertheless throughout recent years, new families with a different synergistic mechanism of action have arisen and allow for their association and safe adaptation to each particular case.

Incretin mimetics<sup>8</sup> have proven effective for hyperglycemia without the corresponding risk of hypoglycemia. Both oral DPP4 inhibitors and injectable GLP-1 analogues have been thoroughly studied, the later achieving a greater weight loss and thus being indicated in patients with BMI over 30 with further advantage of weekly administration. They can be associated to other oral antidiabetic drugs (OADs) and to insulin.

More recently, SGLT2 inhibitors<sup>9</sup> have proven effective in the control of type 2 diabetes through an increased excretion of glucose leading to lower blood glucose levels regardless of insulin. They have been studied alone and with other oral medications and insulin. They never cause hypoglycemia and they have scarce side-effects mostly limited to genitourinary infections. They also lead to significant weight loss and they have the advantage that blood pressure (BP) is reduced, along with cardiovascular risk and mortality.

Despite the availability of the best pharmacological treatments, diabetes education should not be dismissed, since it is the cornerstone of diabetes management and should also be implemented in prisons, with nursing staff developing a leading role for patients to

self-test when indicated and for them to achieve an effective control of their disease.

We must not forget that diabetes needs a comprehensive intensive therapeutic approach<sup>10</sup>, with a thorough assessment and control of all cardiovascular risk factors since they are the main cause of mortality in these patients.

Monitoring programs should be implemented in prison for all inmates suffering the disease as to control all potential complications, both macro and microangiopathic. Regular control and treatment of hypertension and hyperlipidemia are needed along with the implementation of active programs for inmates to give up smoking.

It is highly recommended that clinical records be shared by the health system to achieve a comprehensive and complete management of the disease with structured intervention protocols including the derivation to specialized services when needed. The health of diabetic patients depends on this structured and multi-disciplinary approach.

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