



Insulin initiation in the community

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Type 2 diabetes is a progressive condition, where beta cell function declines and fails, therefore requiring almost all individuals to be commenced on insulin therapy. There appears to be a very real clinical inertia within community care in relation to the initiation of insulin and GLP-1 hormones in the community. This appears to be dependent on a number of variables, most notably cost, efficacy and side-effects. Also access to specialist supports such as access to a diabetes specialist nurse and consultant care has to be considered. This is not just unique to Ireland, it is a worldwide phenomenon. As with most insulin initiation and GLP-1 hormone initiation in the community, it is primarily for individuals with type 2 diabetes, so this article will focus on that population.

Clinical inertia

Clinical Inertia is a widely recognized problem in diabetes management within primary care, directly linked to poor glycaemic control and elevated HbA1c levels (Ziemer et al, 2005). Lack of familiarity, education, training and over estimation of the care needed are all reasons cited by primary care physicians for not intensifying current treatment regimes or initiating insulin therapy (Philips et al, 2001). While non-adherence was cited as another contributory factor, this has been shown in many studies not to be as big an issue as clinical inertia (Reach, 2008, Giugliano et al, 2011). There is a general consensus amongst many primary care physicians that insulin therapy should only be commenced when absolutely necessary (Peyrot et al, 2005), despite the fact that there is evidence to

suggest that by achieving good glycaemic control early in the course of diabetes, that long term vascular outcomes improve and potentially prolong beta-cell function (Niswender et al, 2002).

Role of general practice

Traditionally insulin initiation in type 2 diabetes has usually been commenced within a specialist setting and/or in secondary care. Due to type 2 diabetes reaching epidemic proportions, which is putting huge strain on an already over stretched secondary care service, there is a growing need for physicians within primary care to take on the management of what may have traditionally been viewed as more complex patients with type 2 diabetes.

Targets for HbA1c levels are not being met despite more drug regimes being made available. Type 2 diabetes is a progressive condition and this was shown through the UK Prospective Diabetes Study, which saw that those with type 2 diabetes had only 50% of normal insulin secretion at diagnosis and after six years had only less than 25% (UKPDS, 1998). Therefore the only way to achieve good glycaemic control in many of these patients is through the initiation of insulin.

Patient education

There is no doubt that intensifying regimes and/or initiating insulin within the type 2 diabetes population requires a certain amount of support, confidence and knowledge, not just for the healthcare professional, but also the patient. The education that is involved is time consuming and intensive, which may be a barrier for both the healthcare professional and the individual concerned. A number of factors must be considered before commencing someone on insulin therapy or a GLP-1 hormone. Patient safety is an obvious primary concern with environmental and social factors also being taken into consideration. Do they live alone? Have they home support for e.g. home help, public health nurse etc. What is their health literacy like? What is their ability to understand and adhere to an insulin therapy regime?

One of the major barriers to insulin initiation is the individual's own resistance or reluctance to commence insulin therapy. Many patients view commencing insulin therapy as a failure and subsequently there is a huge element of self-blame (Hunt et al, 1997). In one study, up to three quarters of participants viewed the initiation of insulin therapy as a 'severe crisis' in their condition (Ratzman, 1991). This may result in an individual go through the Five Stages of Grieving (Kubler-Ross, 2005). These are five emotional states of denial, depression, anger, bargaining and acceptance which an individual goes through not just when grieving for a loved one, but it is now well recognized that they also occur when grieving for a loss or their health or what they perceive as a worsening of their condition (Brown, 1985). Unless the healthcare professional acknowledges and understands these five stages and supports the individual, concerned this may lead to significant mental health issues such as depression, which may affect their adherence to an insulin regime (Kilbourne, 2005). There is a significant relationship between diabetes and depression, which may present another barrier to commencing insulin therapy (Robinson et al, 2008).

Side effects of insulin

The side effects of insulin can also be a barrier to both patients and healthcare professionals commencing any regime. Hypoglycaemia, weight gain and complications are very real concerns and should be discussed with any individual when commencing insulin therapy to allay any fears that could

present a challenge to adhering to a regime. Other barriers to insulin initiation are concerns over restrictions to daily life that they suspect may arise when they are on insulin therapy, as well as an increase in the frequency of capillary blood glucose testing (Okazaki et al, 1999).

Needle phobia is another issue when commencing insulin therapy and its severity and prevalence can be underestimated amongst the healthcare profession. Up to 14% of people with diabetes can display some injection related anxiety, with up to 45% avoiding insulin injections (Zambanini et al, 1999). Needle phobia can be related to an underlying general anxiety disorder (GAD) which may need to be considered and addressed prior to commencing insulin therapy (Popkin et

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al, 1988). Education about proper injection technique is also paramount to prevent issues such as lipohypertrophy which can affect insulin absorption and therefore adversely affect glycaemic control (Young et al, 1984). Lipohypertrophy arises when a lump occurs under the skin due to an accumulation of fat from multiple insulin injections at that particular site (Rapini et al, 2007). Not changing needles and injecting at the same site repeatedly can contribute to the development of lipohypertrophy. The use of educational aids to assist an individual practising injection technique prior to the commencement of insulin therapy will ensure best practice, help allay any fears and allow for an open, honest discussion in relation to their overall diabetes management.

There is a real onus on healthcare providers to ensure that a patient fully understands the reasons why insulin therapy is being considered and the benefits to an individual's health. Many people who have type 2 diabetes do not consider insulin therapy to be part of their management, only associating it with type 1 diabetes, and when the issue is raised with them, it can come as a huge shock. There is an opportunity when reviewing medication regimes or when educating an individual with type 2 diabetes on glycaemic control, to discuss their thoughts and perceptions, (known as health beliefs) in relation to insulin therapy, which effectively is facilitating and 'sowing a seed' towards self-efficacy and empowerment.

Conclusion

Insulin is a safe and effective way of achieving good glycaemic control in individuals with diabetes; unfortunately it is not initiated enough, used often enough or aggressively enough. The use of education when initiating insulin therapy within the community is essential in helping to increase self-efficacy in an individual with type 2 diabetes and also in coping with the



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complexities of the regime. Insulin therapy should be viewed as a normal and routine part of diabetes management, rather than being used as a threat for when a patient does not adhere with certain aspects of their care. Education helps to break down barriers and dispel many of the myths that are associated with insulin therapy.

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