Diabetes Update 2020 – Workshop #3 – Dr. Peter Senior

Question: What would you say the rates of diabetic ketoacidosis (DKA) are in post-pancreatectomy diabetes given that they are also lacking glucagon?

Answer: Don't know that I would make any inferences that this would be protective – the absence of insulin will put people at risk and other counter-regulatory hormones (epinephrine, cortisol could still promote lipolysis).

Q: For the first case study with the total pancreatectomy and recent severe nocturnal hypo, why wouldn't your first action be to prescribe real time continuous glucose monitoring (rtCGM)? As you said she has no endogenous glucagon secretion, is very sensitive to insulin and will have a variability? Isn't she bound to have another episode of hypoglycemia even if you optimize insulin therapy for "most of the time?". Wouldn't you want to have a tool that alerts her of impending hypoglycemia before this occurs?

A: rtCGM is only a diagnostic tool – not therapeutic per se. We knew she was having (and at risk) for lows because of a lack of skill with using her insulin and knowing how best to do this safely. Costs and coverage, patient acceptance are also worth considering. We prioritise avoiding hypo over tight control. Libre can be very useful to reduce hypo even without real-time results. Alarm fatigue can be a real nuisance.

Q: In a patient with T2DM on oral agents who then has a total pancreatectomy necessitating multi daily insulin injections (MDI)... have you found such patients require a typical weight-based TDD for T2DM, or that they too have greater insulin sensitivity?

A: Insulin sensitivity increases, and I would not recommend starting at the same kind of doses for typical T2 - especially as they are often not eating well post-op. We have had some very sad cases of people on insulin for T2 having bad low post-pancreatectomy because people don't realize that their insulin needs have changed.

Q: In patients who have undergone a partial pancreatectomy, have you had success in managing them just with oral agents or do you find that they usually need insulin?

A: Highly variable, depending on insulin sensitivity and diet, and how much residual beta cell mass – those who keep fit and active and limit quantity of high GI carb may manage on no treatment.

Q: I also wonder how much malabsorption contributes to some of the insufficiency given the lability in cystic fibrosis (CF). How would you characterize good control in a patient with CF?

A: Likely varies between individuals. Good control should likely focus as much on nutrition and maintaining weight. Best you can manage without hypoglycemia that the patient is willing.

Q: Can you review some treatment strategies with CF patients?

A: I think adding basal insulin early can be helpful. MDI is often very burdensome as is frequent blood glucose monitoring (BGM). Libre might be useful. Promoting insulin as a nutritional aid (high BG indicates energy not being used or stored for later – rather than the enemy). Often don't need that much insulin overnight. Consider bolus at one meal per day. Probably avoid GLP1 or SGLT2 in general. DPP4 would likely be safe. SU's might help in the short term, but may burn out the beta cells.

Q: Have you seen anyone with a pump and pancreatectomy?

A: Yes – it can work, depending on the skill of the operator – may be good because of the potential to use very small doses of insulin for basal and boluses. Half unit pens are useful too.