Type 2 Diabetes Remission: What is it and how do I discuss it with my patients?

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Disclosures

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A new understanding of Type 2 Diabetes

‘Inevitable’ decline in beta cell function & progression towards insulin therapy
(50% on insulin after 10 years T2DM)

Type 2 Diabetes: a new understanding

Past

Inevitable decline in Beta cell function
Remission Research: Effective Approaches

1. Bariatric Surgery
2. Low Calorie Diets 800kcal/d (DiRECT)
3. Low carbohydrate lifestyle

n.b. Definitions of remission/study populations vary

Which is ‘best’?

Whichever weight loss method suits the individual
Diabetes Remission Clinical Trial (DiRECT)

T2DM up to 6y, not on insulin

Remission: < 48mmol/mol off all diabetes meds (withdrawn at start)

n = 149 (intervention & control groups); 98% caucasian

Leslie WS et al BMC Family Practice 2016; 17:20
Why use a liquid diet for weight loss?

- Complete nutrition in few calories
- Lack of hunger
- Safe & effective
- Triggers for eating stand out
- Break habits
- Creates ‘blank slate’ for improved eating habits
- Complete break from food decisions
- Motivation from rapid weight loss
DiRECT Remissions vs Standard Diabetes Care

% in remission

Control

Intervention

Lean ME et al Lancet Db&End 2019
CVD Risk Reduction with remission

- High risk
- Q-RISK = 16.1%
- Heart age = 70.4 years
- HbA1c = 57.0 mmol/mol
Remissions by 24-month weight loss in DiRECT

Lean et al, Lancet Diabetes and Endocrinology (2019)
If a patient wishes to aim for remission of type 2 diabetes, particularly within 6 years of diagnosis, evidence-based weight management programmes are often successful.

Davies M et al, *Diabetes Care & Diabetologia* 2018
T2DM Remission in Diabetes Guidelines: Diabetes UK (March 2018)

For remission of type 2 diabetes aim for weight loss of approximately 15kg, as soon as possible after diagnosis (if overweight/obese)

Discussing Remission
Poll Question

How confident would you currently feel discussing Type 2 Diabetes Remission in a patient consultation? (1 = not confident at all, 10 = extremely confident)
Main Principles of Remission

1. Only in **Type 2 Diabetes**

2. More likely in **short duration** T2DM (<6y)

3. Requires significant **weight loss** (15Kg, 2.5 stones)

4. It is **not a ‘cure’** – susceptibility to T2DM remains

5. Maintenance of remission requires **maintenance** of lower weight
Reduced liver fat with low calorie diet

Baseline

36% liver fat
Remission Physiology
Pancreas

Insulin Keys Inc.
Muscle Insulin Resistance - genetic/lifestyle causes

- demand for insulin
- Beta cell workers work harder
Fat deposits in Liver

- Disrupts liver function

- Glucose from liver

- Beta cells now working overtime

Alison Barnes 2019
Fat deposits in Pancreas

- Fat overspills from the liver
- Poor working conditions
Some Beta Cell workers have had enough!

- Remaining workers can’t keep up with demand
- Increased blood glucose levels/T2DM
In early T2DM it is possible to get your workers back

- Energy restriction to use fat stores
  - liver (1-2 weeks)
  - pancreas (8-12 weeks)
- Whether they come back is beyond your control
- Maintain improved conditions or lose them again
1. HbA1c < 48mmol/mol (2 tests, 6 months apart)
2. After intentional weight loss
3. Off all diabetes medications

- Diabetes UK/ADA to announce International definition early 2020

• Remission is possible – not for all
• Requires significant weight loss
• Other benefits if remission not achieved
• Individual Action Plan
• Via GP systems
• Diabetes Update Spring 2020

Case Study 1: Adam

- 52 years old
- BMI 35 kg/m²
- HbA1c 59 on Metformin 500mg bd
- T2DM diagnosed 2 years ago
Poll Question

Would you discuss remission with Adam?

a. Yes
b. No
c. I’m not sure
Conversation Considerations

If your patient is not aware of remission & has had T2DM <6 years:

1. Ask if they are aware remission may be possible
2. Explain how remission works
3. Evaluate motivation – it’s a choice not an expectation
4. Discuss potential ways of achieving 10-15kg weight loss
5. Find out what support would be helpful, and when
6. Agree Action Plan/Refer to local services
Case Study 2: Kath

• 65 years old

• BMI 27.5 kg/m²

• HbA1c 64 mmol/mol on Metformin 1g bd, Gliclazide 160mg bd and Sitagliptin 100mg od

• T2DM 12 years
Poll Question

Would you discuss remission with Kath?

a. Yes

b. No

c. I’m not sure
Conversation Considerations

If your patient asks about remission with T2DM > 6 years:

1. Establish what they already know
2. Discuss factors affecting likelihood of remission
3. Recognise motivation to make changes & support them!
4. Discuss other benefits of weight loss
5. Goals: improved glycaemia/health/QoL, reduce medications
Remission work continues...

1. DUK/ADA consensus on remission criteria
2. DiRECT Extension results (5 years follow up)
3. Remission in other ethnicities
4. ReTUNE (Weight loss in BMI < 27)
5. NHS England Low Calorie Diets for T2DM – pilot in 5,000 people
Summary

1. Early Type 2 diabetes can be put into remission

2. It is not a ‘cure’ & will relapse with weight regain

3. Appropriate conversations at an early stage
   • Message of hope
   • Motivate change
   • Informed patient choice
   • Positive practitioner experience
Poll Question: review

How confident do you feel discussing Type 2 diabetes remission in a patient consultation?
(1= not confident at all, 10 = extremely confident)
Thank you – questions?

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