

# DIFFERENTIAL DIAGNOSIS OF DIABETES

FLAME LECTURE: 2

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# LEARNING OBJECTIVES

- ▶ TO UNDERSTAND HOW TO COME UP WITH A DIFFERENTIAL FOR YOUR SUSPECTED DIABETES MELLITUS TYPE 2 PATIENT
- ▶ TO DESCRIBE AND ELIMINATE ALTERNATIVE DIFFERENTIALS
- ▶ PREREQUISITES
  - ▶ NONE
- ▶ SEE ALSO: FOR CLOSELY RELATED TOPICS
  - ▶ FLAME LECTURE 1: TYPE 1 VS TYPE 2 DIABETES

# DIFFERENTIAL DIAGNOSIS

## ▶ **Type 1 Diabetes**

- ▶ Caused by autoimmune destruction of the islet cells of the pancreas, and onset is typically in childhood

## ▶ **Latent Autoimmune Diabetes in Adults (LADA)**

- ▶ Slowly progressive form of autoimmune diabetes mellitus characterized by older age at diagnosis, the presence of pancreatic autoantibodies, and the lack of an absolute insulin requirement at diagnosis
- ▶ Tends to become rapidly unresponsive to oral medications and parenteral agents, such as incretin mimetics

# DIFFERENTIAL DIAGNOSIS (CONT'D)

## ▶ **Maturity Onset Diabetes in the Young (MODY)**

- ▶ A rare form of diabetes caused by genetic mutation in a single gene
- ▶ Most common: HNF1-alpha, HNF4-alpha, HNF1-beta, glucokinase

## ▶ **Transient Hyperglycemia with Illness/Stress**

- ▶ Hyperglycemia resolving abruptly after dissipation of acute illness
- ▶ Generally affects patients without known diabetes, although patients with diabetes might also develop stress hyperglycemia

# DIFFERENTIAL DIAGNOSIS (CONT'D)

## ▶ **Psychogenic Polydipsia**

- ▶ Primary increase in water intake
- ▶ Most often seen in middle-aged women and in patients with psychiatric illnesses
- ▶ Can also be caused by hypothalamic lesions that directly affect the thirst center, as may occur with an infiltrative disease such as sarcoidosis

## ▶ **Central Diabetes Insipidus**

- ▶ Associated with deficient secretion of antidiuretic hormone (ADH)
- ▶ Most often idiopathic (possibly due to autoimmune injury to the ADH-producing cells) or can be induced by trauma, pituitary surgery, or hypoxic or ischemic encephalopathy

## ▶ **Nephrogenic Diabetes Insipidus**

- ▶ Characterized by normal ADH secretion but varying degrees of renal resistance to its water-retaining effect
- ▶ Most common causes include: Lithium toxicity, V2-ADH receptor defect, AQP2 mutation

# TREATMENT GOALS

- ▶ Target A1C goals in pts with T2DM should be tailored to the individual, balancing the improvement in microvascular complications with the risk of hypoglycemia
  - ▶ A reasonable goal of therapy might be an A1C value of  $\leq 7.0$
  - ▶ Goals may be set higher for older adult patients, those with comorbidities, a limited life expectancy and little likelihood of benefit from intensive therapy
- ▶ Diabetes education
  - ▶ Newly diagnosed diabetes should partake in a comprehensive diabetes self-management education program, which comprises of instruction on nutrition, physical activity, improving metabolic control, and preventing complications

## TREATMENT GOALS (CONT'D)

- ▶ Vigorous cardiac risk reduction is also imperative:
  - ▶ Smoking cessation
  - ▶ Aspirin
  - ▶ Blood pressure control
  - ▶ Reduction in serum lipids
  - ▶ Diet and exercise

# REFERENCES

1. Riddle et al. Diabetes Care 2018 Jun; 41 (6): 1121-1124  
<http://care.diabetesjournals.org/content/41/6/1121>
2. Nutrition Recommendations and Principles for People With Diabetes Mellitus
3. Diabetes Care May 1994, 17 (5) 519-522; **DOI:** 10.2337/diacare.17.5.519  
<https://professional.diabetes.org/podcast/di071901-path-diabetes-care-goal-based-algorithm>
4. [http://care.diabetesjournals.org/content/41/Supplement\\_1/S55](http://care.diabetesjournals.org/content/41/Supplement_1/S55)
5. <https://www.aafp.org/afp/2016/0115/p103.html>
6. <https://www.aafp.org/afp/2010/0401/p843.html>
7. <https://www.diabetes.org.uk/diabetes-the-basics/other-types-of-diabetes/mody>
8. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3144755/>
9. <https://www.uptodate.com/contents/diagnosis-of-polyuria-and-diabetes-insipidus>
10. <https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-mellitus>