

Diabetes Panel

Blake Cooper, MD, MPH
 Melissa Magwire, MSN, RN, CDCES
 Moderator: Paul Chous, MA, OD, FAAO

Disclosures

- Blake Cooper is a speaker & consultant for Optomed, American Diabetes Association, Genentech and Regeneron
- Melissa Magwire
- A. Paul Chous is a speaker & consultant for AI Optics, American Diabetes Association, LKC Technologies and Regeneron

Why We're Here

- **Personal and Professional Passion for Great Diabetes Care**
- **Commitment to Multi-disciplinary Collaboration**
- **Dedication to improving clinical acumen & patient outcomes**

Some General Themes

- **What do ECPs want/need from PCPs/Endos?**
- **What do PCPs/Endos want/need from ECPs?**
- **What do retina specialists need from optometrists?**
- **What are the barriers to collaborative care and how can we overcome these?**
- **What is cardiometabolic disease & how can ECPs help our patients live longer & healthier lives?**

Key Point

- **Lowering the patient's blood sugar level and preventing vision loss are far less useful if the patient dies!**

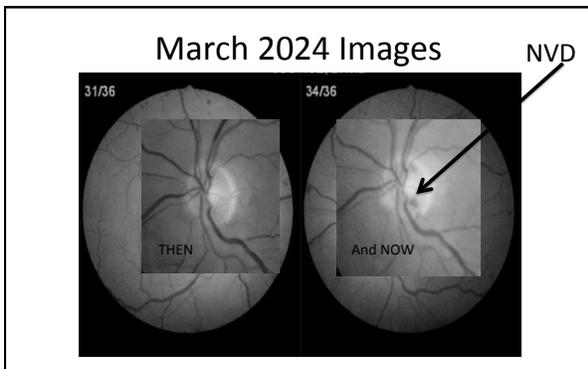
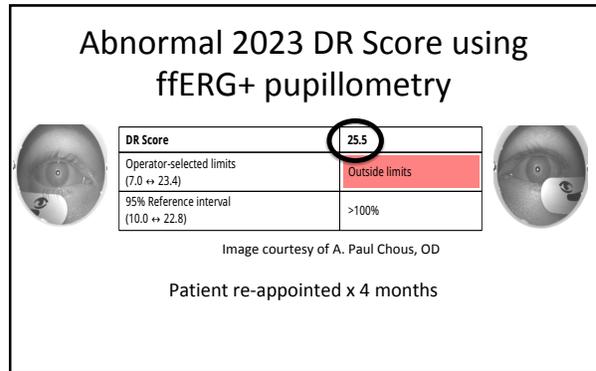
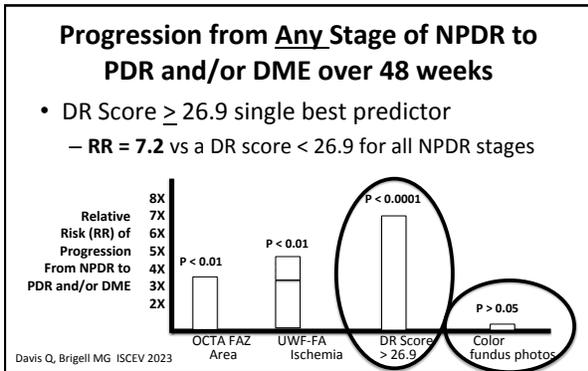
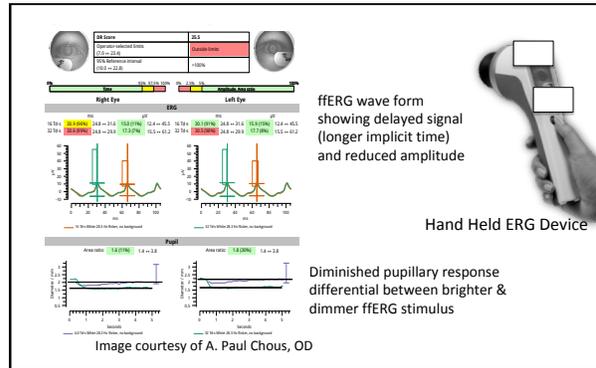
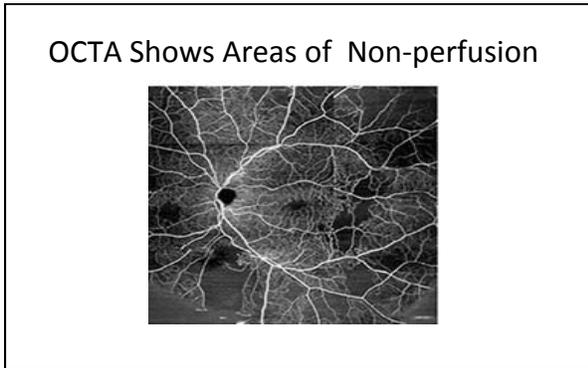
2/3 of T2DM patients on metformin monotherapy for glucose control remain at HIGH CV risk

Diabetes Care. 2020;43:2034-41.

Problems Diabetes Care in the USA

- 90% of patients do not see an endocrinologist and half have no access within 20 miles
 - 8000 endos (1/3 not in clinic) and 37 million patients; lowest reimbursement amongst internal medicine specialists
 - 80% of patients who would benefit from cardiovascular protective drugs are not on those drugs
- **Only 10% of patients receive any formal diabetes education**
- Insurance/time constraints/care complexity pose obstacles to coordinated care

Prim Care Diabetes. 2018 Jun;12(3):218-223.



- ### Chous Case 3 – Diabetes Prevention
- 58 yo male with recently Dx pre-diabetes
 - A1c = 6.3% Fasting glucose = 118 mg/l
 - 'My PCP recommended more exercise and weight loss'
 - Meds include atenolol, 50 mg HCTZ, d/c lisinopril ('made me cough'), ranitidine, rosuvastatin
 - BMI = 36 kg/m² Waist Circumference = 42"
 - OSAS but uses CPAP sporadically a 'few hours a night'
 - Smokes 1 pack/day • Low Macular Pigment
 - Eats 1 serving of fruits/vegetables/day
 - Mom developed T2DM in her 70s

Why Should ODs Care About Diabetes Prevention?

- Every day, 55 Americans with diabetes go blind
- You won't go blind from diabetes if you don't develop diabetes

Prevention Beats Cure

- ◆Has Prediabetes ◆Abdominally obese ◆Smoker
- ◆Male > 50 yo ◆Thiazide Diuretic ◆ Potent statin
- ◆Little Plant Food ◆1st Order Relative had T2DM ◆ Low MPOD

WHAT ARE GM'S RISK FACTORS FOR T2DM?

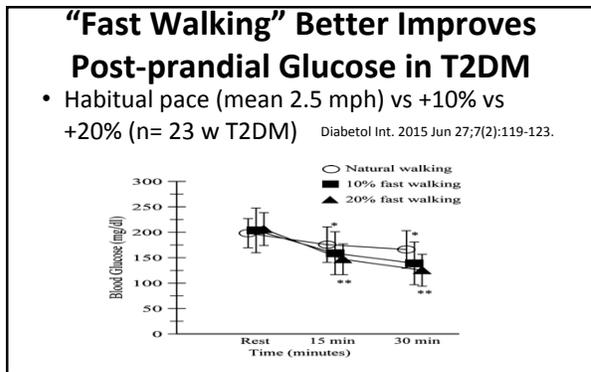
Prevention Beats Cure

Do what we can to prevent need for injections/laser/surgery!



What We CAN Do!

- Early, good metabolic control after Dx
- Minimize hyperglycemia & hypoglycemia
- Use available oral therapies to mitigate DR risk
 - SGLT2 inhibitors
 - ACEI/ARB drugs
 - Fenofibrate
 - Evidence-based supplements
 - Mediterranean-type Diet
 - Vitamin D3
 - Benfotiamine
 - Pycnogenol
 - Xanthophyll carotenoids
 - Quercetin
- Educate, Educate, Educate our Patients
- Motivate our patients
- **Prevent T2DM**





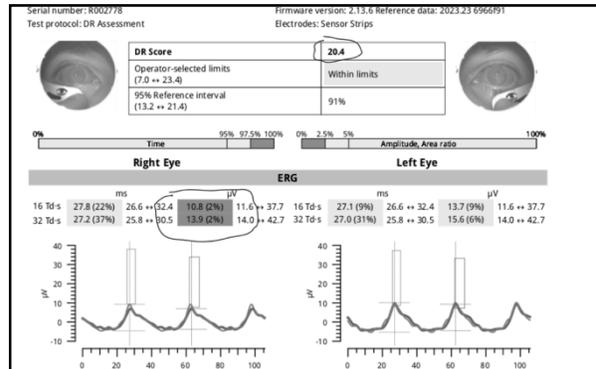
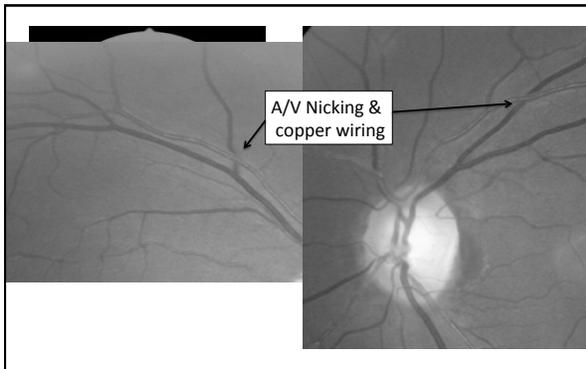

Transform Your Walk: 4 Success Strategies to Lower Blood Glucose and Improve Eye Health with WalkActive

APC Experience

- 23 lbs weight loss over 10 weeks (-11.4%)
- Glucose TIR/TAR improved 32%/85% [absolute Δ +23%/-4%]
- HbA1c lowered from 7% to 6.2%
- Walking speed ↑ from 2.9 mph to 4 MPH

Chous #4 - Another Interesting ffERG Case

- 54 yo ER physician with T2DM x 3 yrs
- Last A1c = 6.7% in-office BP 127/82
- Marathon runner with BMI = 24.7
- **Paternal** Hx of MI age 50
- DFE → few ma without DME – very slow to dilate
- Retinal arterioles are abnormal
- Mild A/V nicking
- ffERG+pupillometry mildly abnormal (DR Score =20.4)

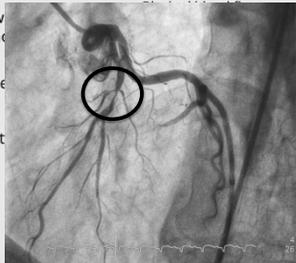


Outcome

- Call with PCP
- LDL-C = 185 mg/dL & TGs =250 mg/dL on 40 mg rosuvastatin (Crestor®)
- Sleep study recommended but not performed
- Referred to cardiology for angiography
- 60% occlusion of the left anterior descending coronary artery (LAD)
 - Cause of 'widow-maker' MI
 - Patient placed on evolcumab (Repatha®)

Widowmaker Heart Attack

- Feeling short of breath, which may develop with or without chest pain
- Breaking out in a cold sweat
- Nausea
- Light-headedness or fainting
- Upper back pain
- Unusual fatigue
- Indigestion



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Chous Case #4: When Should We Refer for CV Risk Reduction?

- 58 yo Black male with T2DM x 3 years on metformin 1g, losartan 25mg, rosuvastatin 10mg and ASA 81mg
- Last HbA1c = 7.1% No CGM Non-smoker
- LDL-C = 105, HDL-C = 35, BP = 138/87
- No apparent DR/DME and no Hx of ASCVD
- Excellent commercial insurance
- **Should this patient be considered for SGLT2 or GLP-1 therapy?**

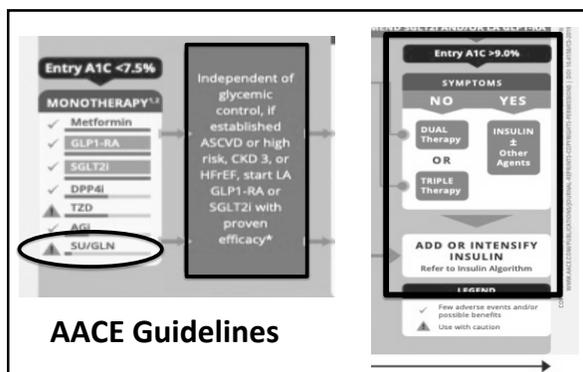
ASCVD Risk Calculator

Atherosclerotic Cardiovascular Disease

<http://tools.acc.org/ASCVD-Risk-Estimator-Plus>

- If 10-year ASCVD < 15% treat BP to < 140/90
- If 10-year ASCVD >15% treat BP to < 130/80
- If 10-year ASCVD > 20%, or known ASCVD, use **high-intensity statin** (rosuvastatin 20-40mg or atorvastatin 40-80mg)
- If > 40 years old without known ASCVD, consider **moderate intensity statin** (e.g. 10-20 mg atorvastatin)
- If known ASCVD & LDL-C \geq 70 on maximum statin Tx, add ezetimibe (Zetia) or a PCSK9 inhibitor (Praluent/ Repatha)

Diabetes Care 2019 Jan; 42(Supplement 1): S103-S123



AACE Guidelines

Should this patient be considered for SGLT2 or GLP-1 therapy?

• **YES**

27.9% High Current 10-Year ASCVD Risk**

- And intensified BP & lipid control
- Note sent to PCP.....

.....Next Year

- Patient on identical meds
- “PCP said I am doing fine”
- Showed patient his risk calculation, discussed ASCVD risk and AACE guidelines
- **Outcome: patient has a new PCP who added empagliflozin**
- **We work for the patient’s benefit, not ‘clinically inert’ PCPs**

Factoids Worth Knowing

- Tirzepatide is the only diabetes medicine FDA-approved for OSAS and is superior for weight loss/muscle preservation c/w other incretin (GLP-1) drugs
- Lower levels of PM2.5, higher coffee consumption and longer breast feeding have been linked to lower T2D risk in multiple analyses
- Higher glucose time-in-range/TIR (70-180 mg/dl) assessed by CGM lowers DR/DKD risk independently of A1c – the goal for most adults with DM is TIR \geq 70%
- Recent analysis shows that uptake of CGM within 6 mos of NPDR Dx significantly reduces risk of sight-threatening complications over the next 12-24 months → ECP should have prescriptive authority for CGM
- NHS (UK) reduced rates of severe vision loss from DR by 80% from 2013-2018 using remote fundus imaging