

History in Nephrology

Legends whose contributions inspire us even today!

eGFR

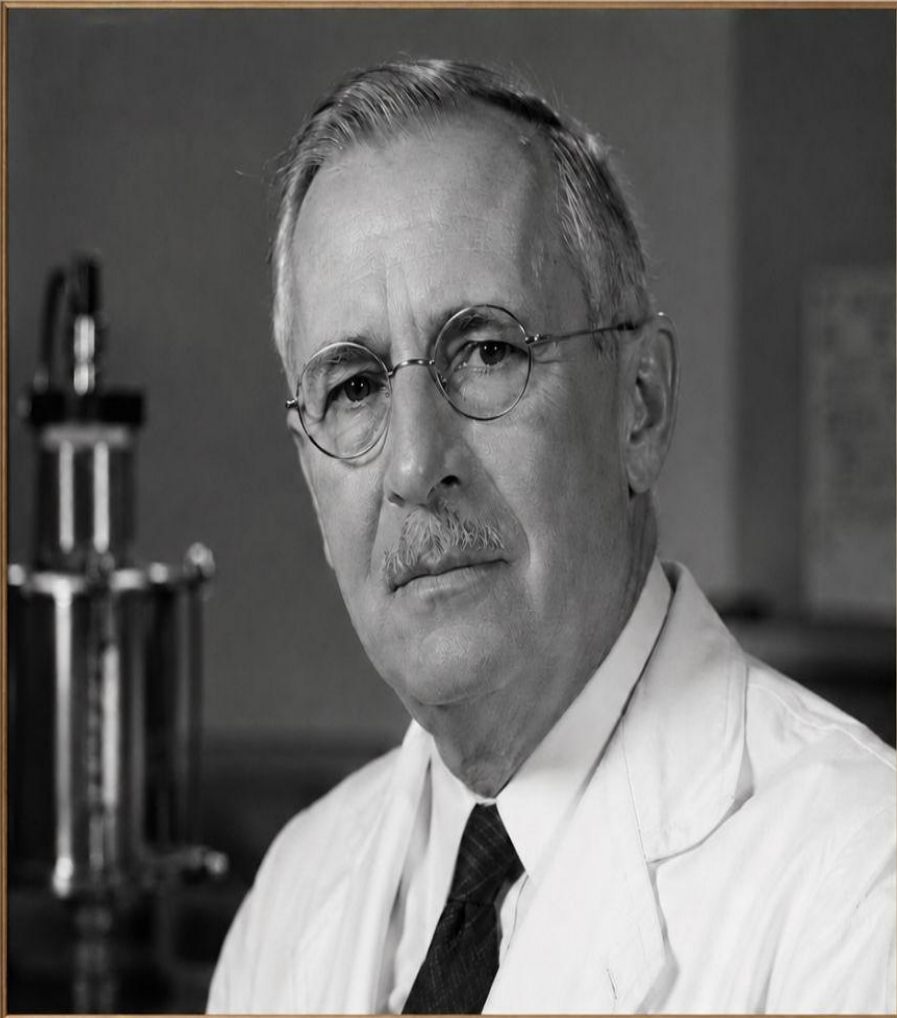
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Oral Hypoglycaemic Agents (OHA) in CKD

Dr. Thomas Addis

&

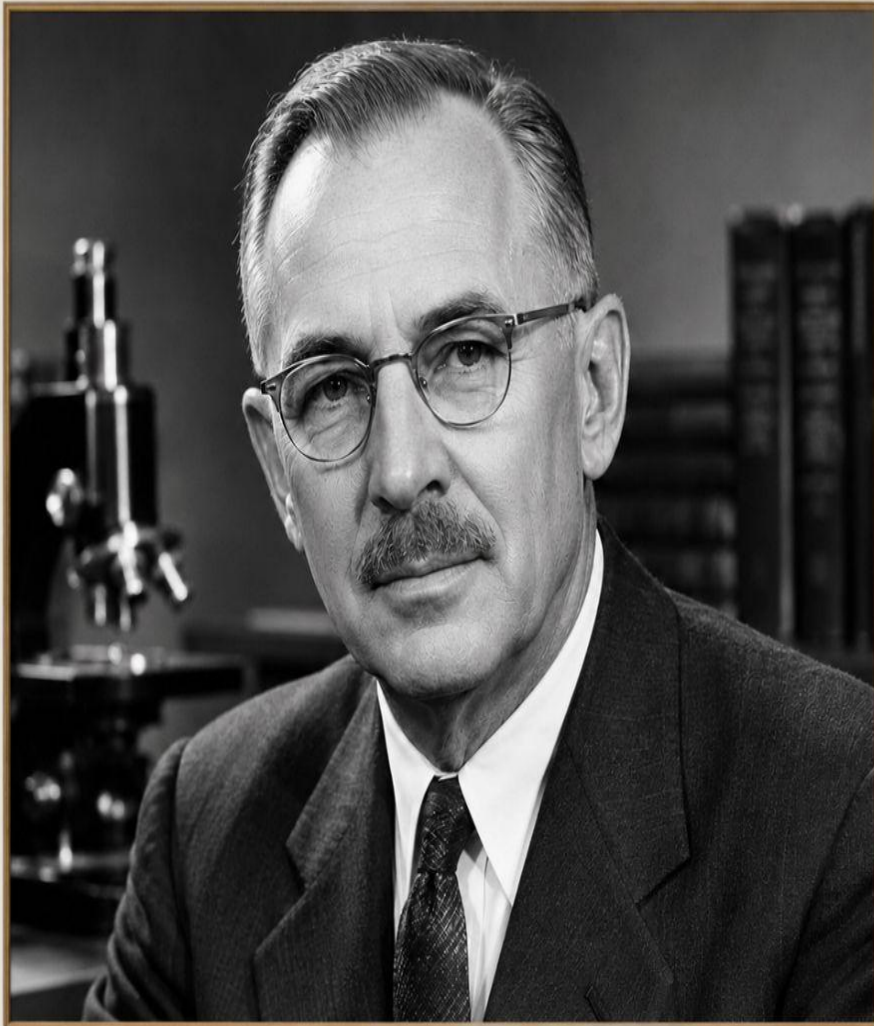
Dr. Homer Smitt



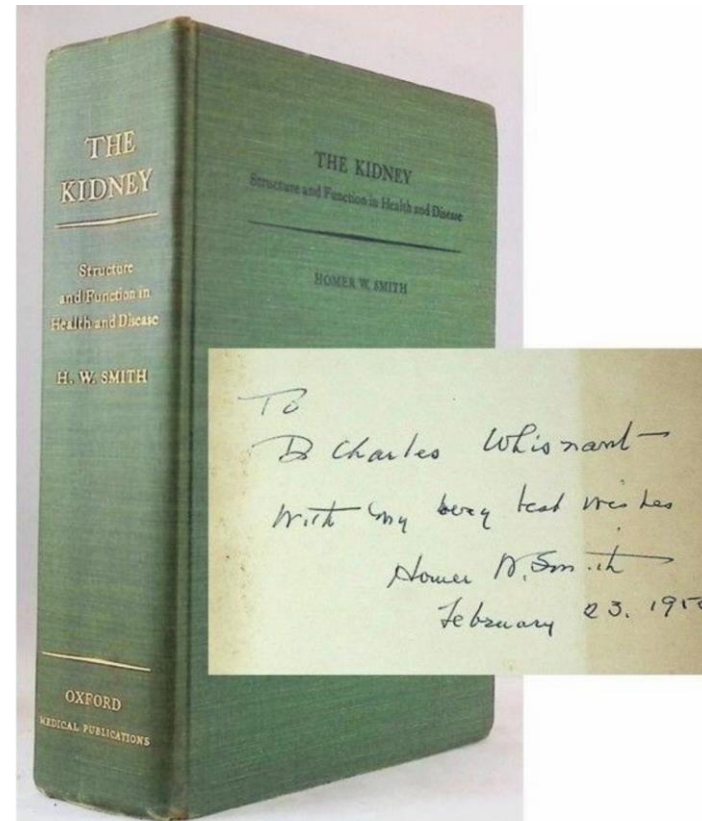
Thomas Addis

Dr. Thomas Addis was one of the early pioneers who emphasized quantitative assessment of kidney function.

Dr. Homer Smitt demonstrated that inulin clearance provides an accurate measure of eGFR



Homer Smitt



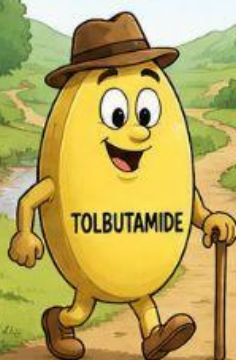
EVOLUTION OF ORAL HYPOGLYCAEMIC DRUGS

From the Past to Better Control

1950s–1960s
THE BEGINNING

SULFONYLUREAS
(1st Generation)

I stimulate
insulin secretion!



First oral agents to
treat type 2 diabetes

1970s–1980s
BETTER & SAFER

SULFONYLUREAS
(2nd Generation)

Stronger &
longer acting!



More potent,
improved efficacy

1990s
NEW MECHANISMS
EMERGE

BIGUANIDE

I reduce hepatic
glucose production
& improve sensitivity!



The foundation
still going strong!

2000s
BEYOND INSULIN
SECRETION

**NEW CLASSES
ARRIVE**

I improve
insulin
sensitivity!

I enhance
incretins!



New targets,
new possibilities

2010s
MORE OPTIONS,
MORE CONTROL

**SGLT2
INHIBITORS**

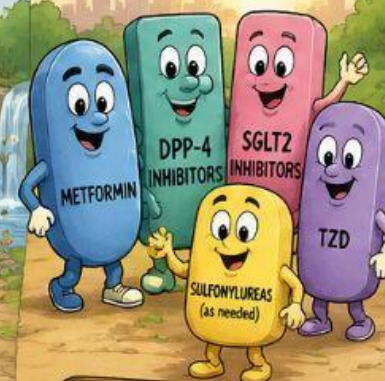
I help kidneys
remove glucose!



Benefits beyond
glycaemic control

2020s AND BEYOND
PERSONALIZED &
COMBINATION CARE

Different paths...
One goal – Better
outcomes!

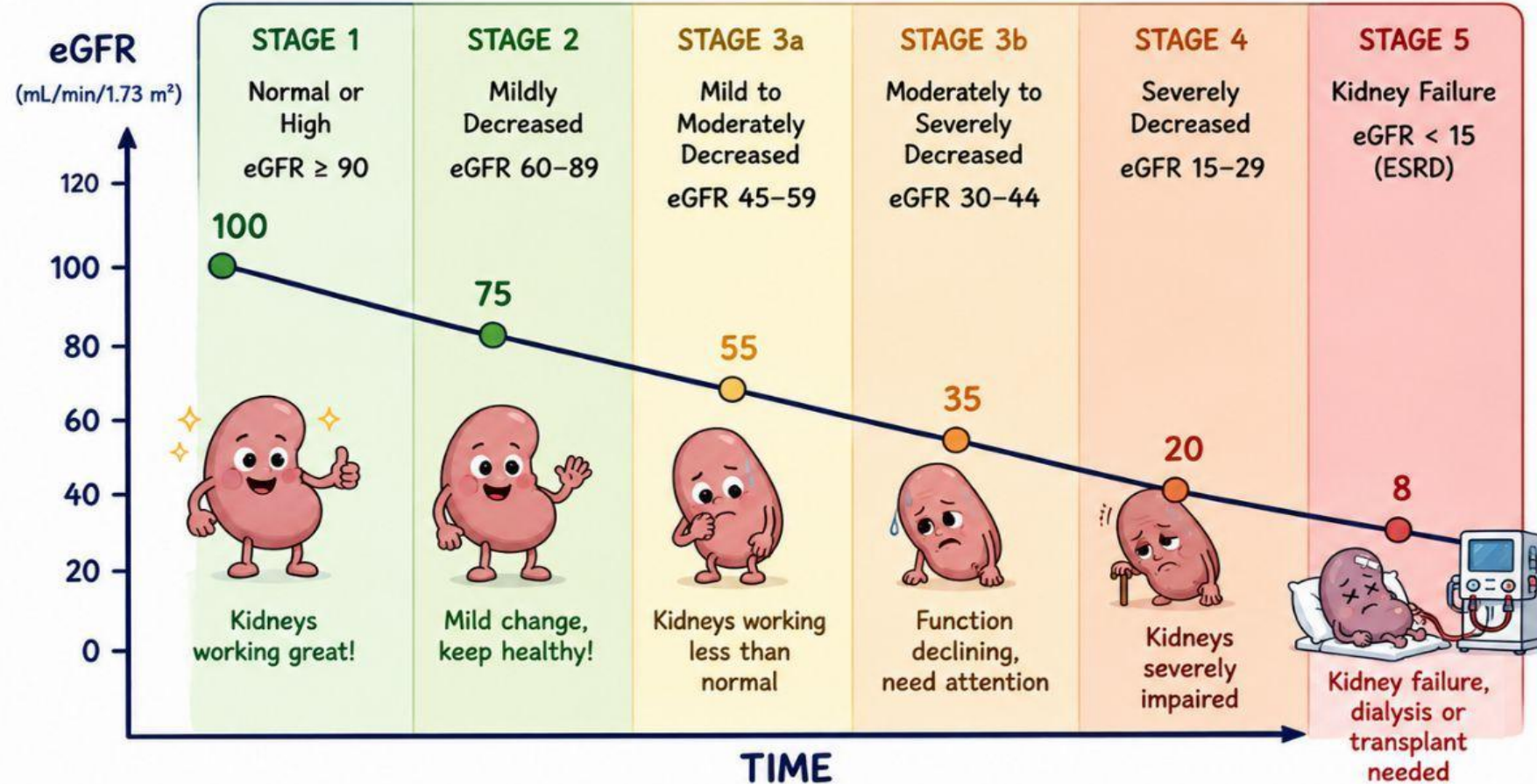


**TARGET-BASED THERAPY
PATIENT-CENTRED CARE
BETTER OUTCOMES**



From one target to many | From glucose control to holistic care | From yesterday to a healthier tomorrow

EVOLUTION OF eGFR



WHAT IT MEANS



Protect your kidneys



Healthy lifestyle, regular check-up



Monitor and control risk factors



Follow treatment and doctor's advice



Plan for renal replacement therapy

Lower eGFR over time means worsening kidney function.
Early detection and care can slow the decline! ❤️

eGFR and Use of OHA



OHA	eGFR (mL/min/1.73 m ²)				
	≥ 90	60-89	45-59	30-44	< 30
Metformin	✓ Safe	✓ Safe	⚠ Use with caution (Max 1000 mg/day)	✗ Avoid / Stop	✗ Contraindicated
Sulfonylureas (Glimepiride, Gliclazide)	✓ Safe	✓ Safe	⚠ Use lower dose	⚠ High risk hypoglycemia Use very low dose	✗ Avoid
DPP-4 inhibitors (Sitagliptin, Vildagliptin)	✓ Safe	✓ Safe	⚠ Reduce dose (Sitagliptin 50 mg)	⚠ Reduce dose (Sitagliptin 25 mg)	⚠ Use with caution (Sitagliptin 25 mg)
Linagliptin (DPP-4 inhibitor)	✓ Safe	✓ Safe	✓ No dose adjustment needed	✓ No dose adjustment needed	✓ Safe (no dose adjustment needed)
SGLT2 inhibitors (Dapagliflozin, Empagliflozin)	✓ Safe	✓ Safe (↑ kidney benefit)	⚠ May continue for kidney & CV benefit	⚠ Usually not effective (Glycemic benefit low)	✗ Avoid / Stop
Others (Acarbose, Pioglitazone)	Generally safe	Generally safe	Use with caution	Use with caution	Use with caution



- ✓ Check eGFR regularly
- ✓ Adjust OHA as eGFR falls
- ✓ Avoid nephrotoxic drugs
- ✓ Prevent AKI (dehydration, contrast, NSAIDs)



Right OHA choice + Regular eGFR monitoring = Better outcomes! ♥

* Doses may vary based on local guidelines and individual patient factors.

TOPIC

“ORAL HYPOGLYCAEMIC AGENTS (OHA) IN CKD APPLICATION OF EGFR; “CHOOSE WISELY, DOSE SAFELY”

- * Evidence-based approach to oral antidiabetic therapy in CKD.
- * Renal dosing based on eGFR
- * Cardio-renal benefits beyond HbA1c reduction
- * When to stop, continue, or modify therapy

HIGHLIGHTS



SPEAKER :

DR. KISHORE S DHARAN

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Prof. & HOD Nephrology
Malankara Orthodox Medical Collage
Kolenchery, Cochin



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No registration



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