

# SALVAGING DIABETIC FOOT

A new cost - effective method

Dr. J. Gnanaraj MS, MCh, FARSI, FICS,  
FIAGES

# DIABETIC FOOT

- 15% of patients with Diabetes develop Foot ulcers {Harrisons p 2125 15<sup>th</sup> Edition}
- After 25 years of Diabetes there is 11% risk of lower limb amputation



# PATHOPHYSIOLOGY

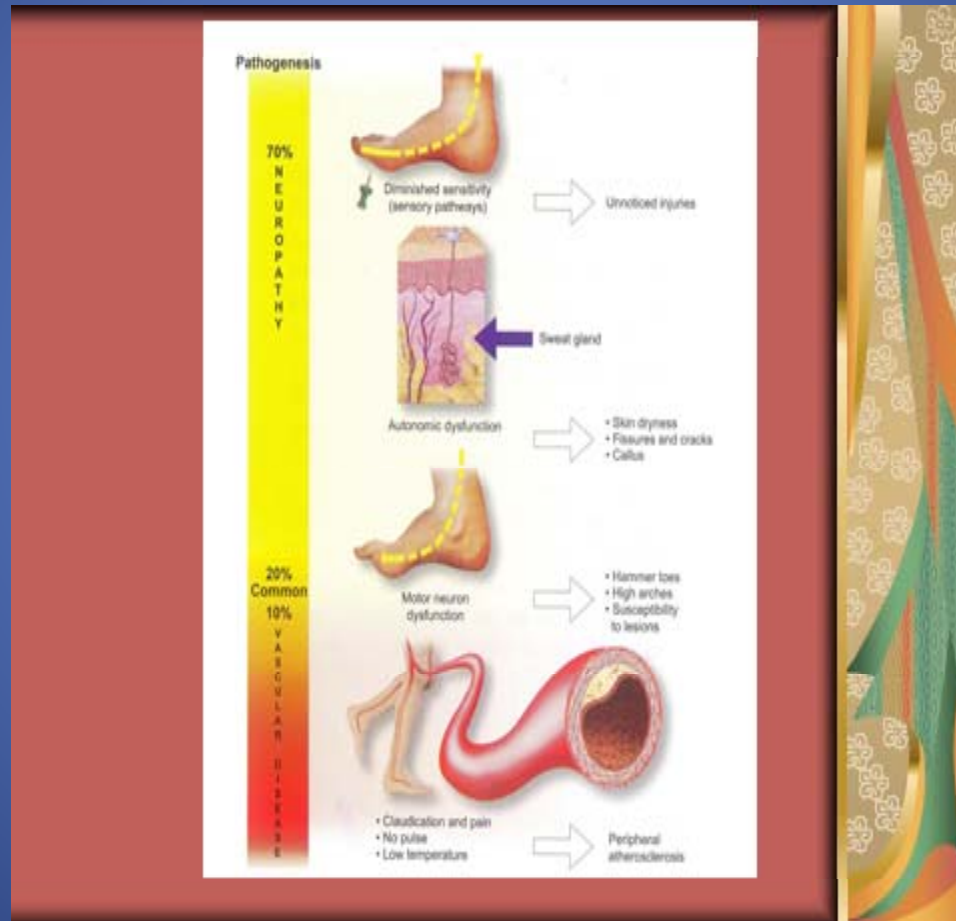
- Peripheral neuropathies- motor, sensory & autonomic
- Macrovascular Arteriopathies - atherosclerosis obliterans producing ischemia



- Microangiopathies-  
arterioles and  
basement membrane
- Tissue glycosylation



# PATHOGENESIS



# Controlled Negative Pressure therapy

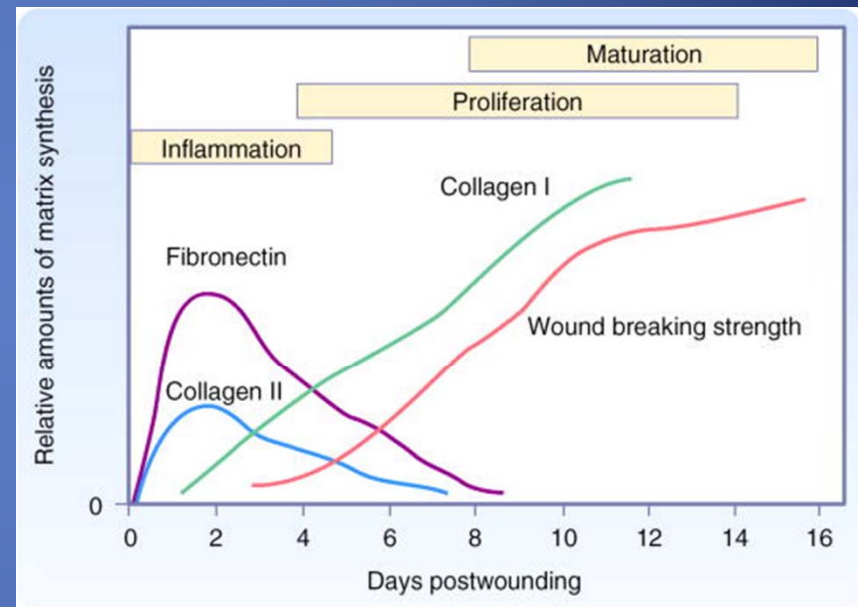
- Moist protected environment
- Reduces peripheral edema
- Stimulates circulation of the wound bed
- Decreases bacterial colonization
- Increases rate of granulation





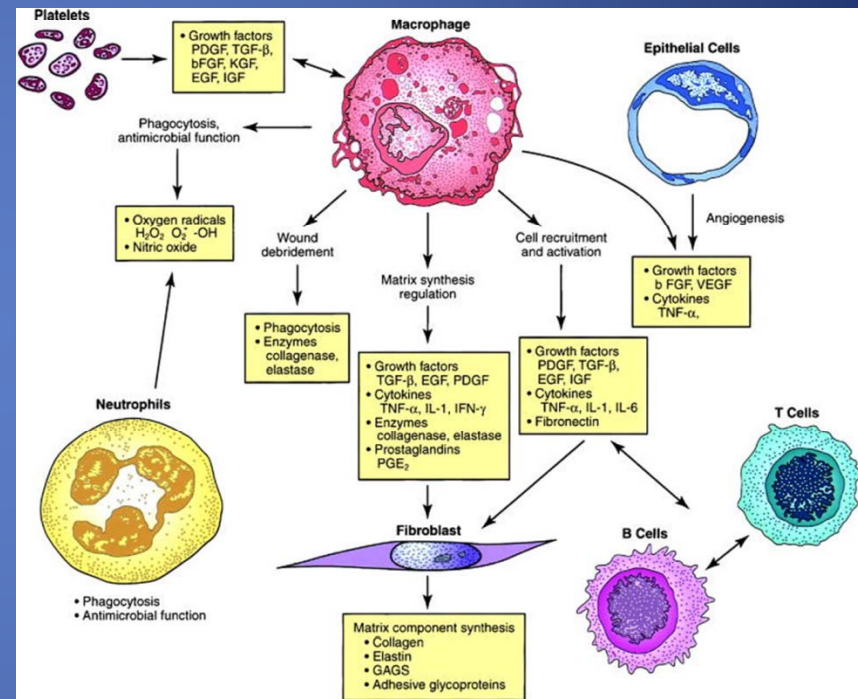
# History

- Wake Forest University school of Medicine Salem NC (1990)
- While studying stress to tissues
- In 1997 3 articles by Morykwas and Argenta about VAC system



# Mechanisms

- Basic cellular functions like oxygen transport, cellular transduction signaling are at the cellular level
- Chronic wounds have impaired circulation and dead tissue





# The commercial ones



# Mr. Vellangiri

- Came with severe sepsis, gangrene and very sick
- Was initially planned for BK amputation



# Topical vacuum therapy

- Locally designed machine
- Longer cycles {from the recommended ones}
- Specially designed for placing the entire limb





# The progress

- The sepsis settled down
- Sugars were well controlled
- Granulations appeared



# Progress

The proximal wound healed



Grafting was carried out



# The result

- Was able to avoid amputation
- Less expensive as less of dressing materials were used





# The advantages

- Less expensive
- Entire limb could be treated with vacuum therapy

