



**DM**

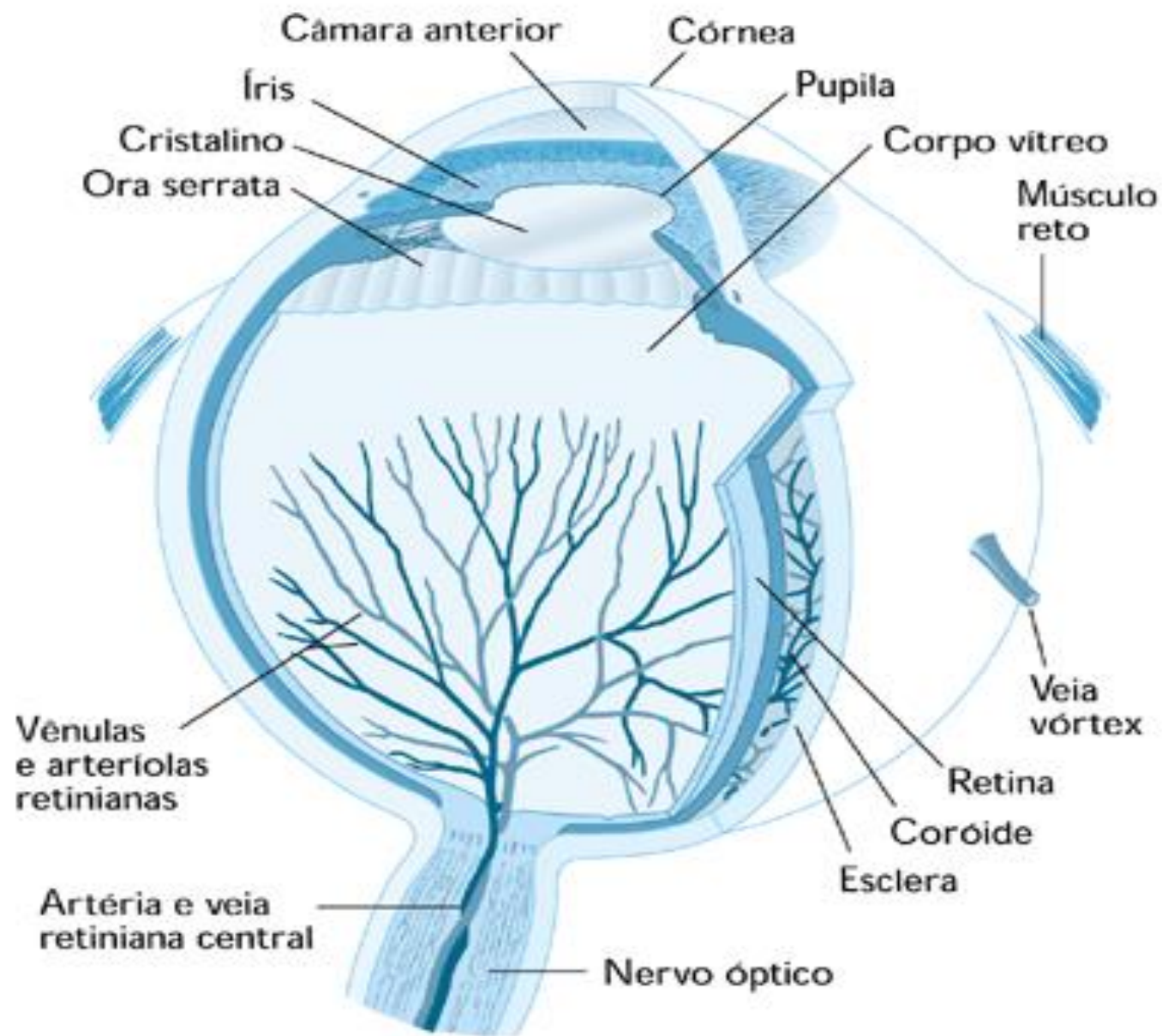
# **Complicações Crônicas**

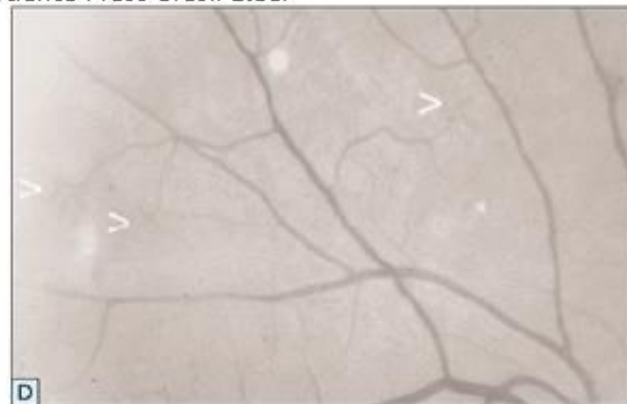
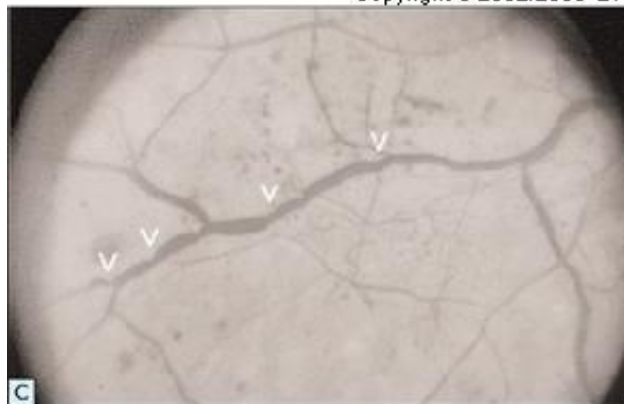
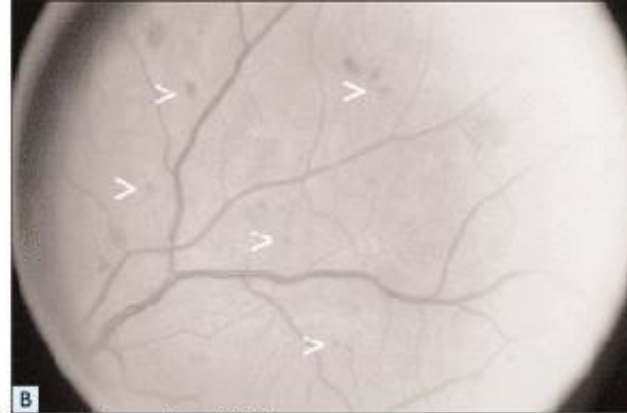
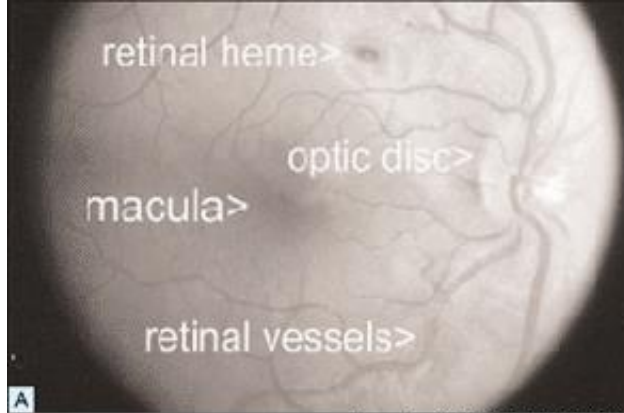
Profa. Dra. Maria Cristina Foss-Freitas

# DM

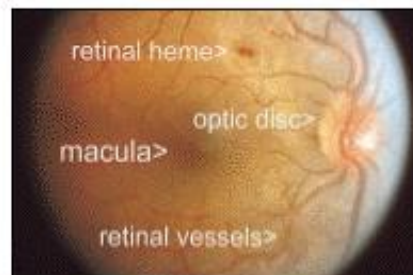
## Complicações Crônicas Microvasculares

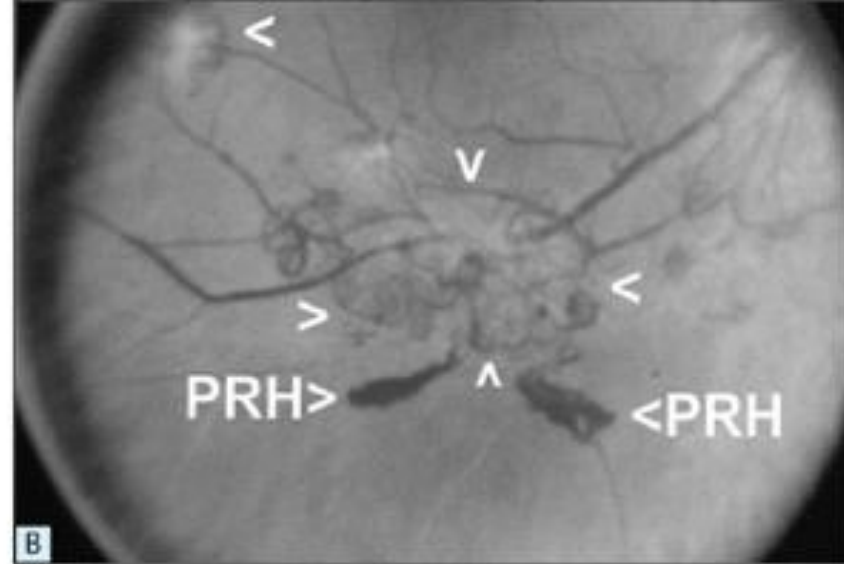
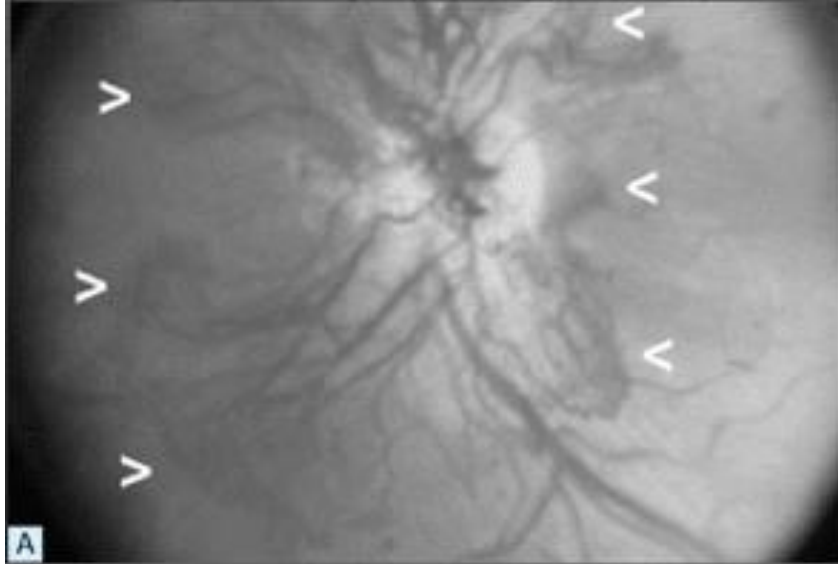
- Retinopatia
- Nefropatia



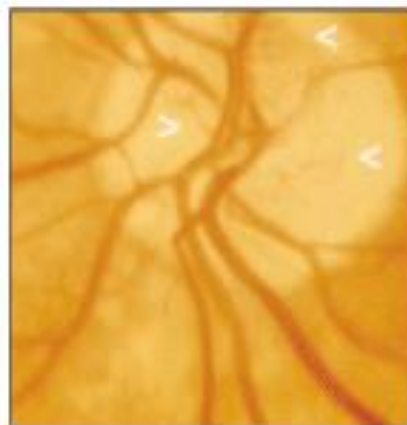
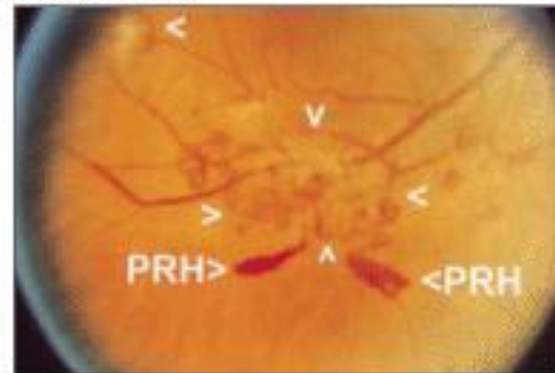
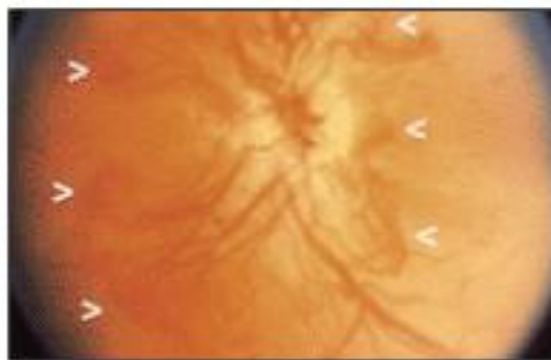


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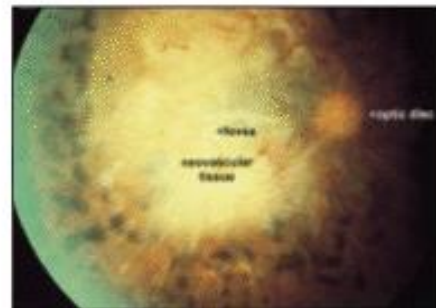
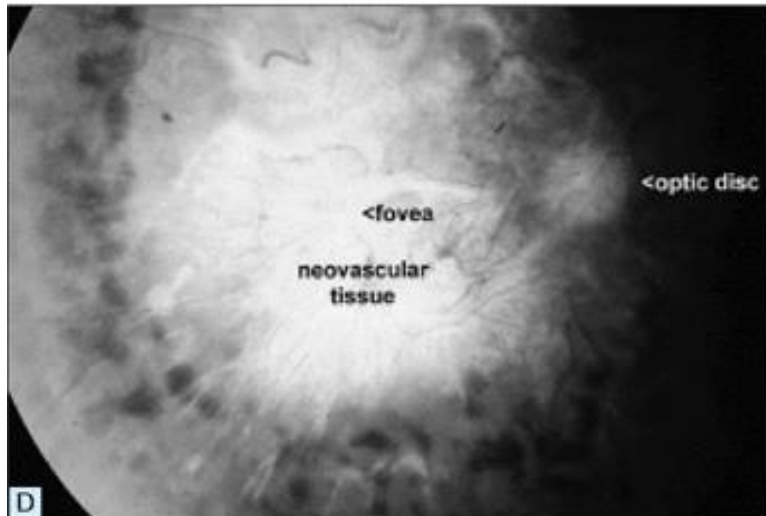


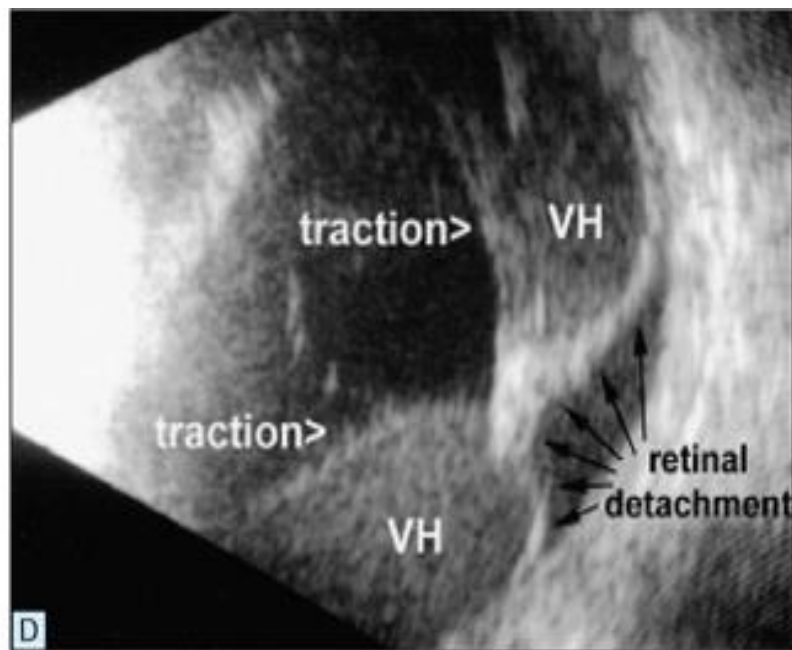
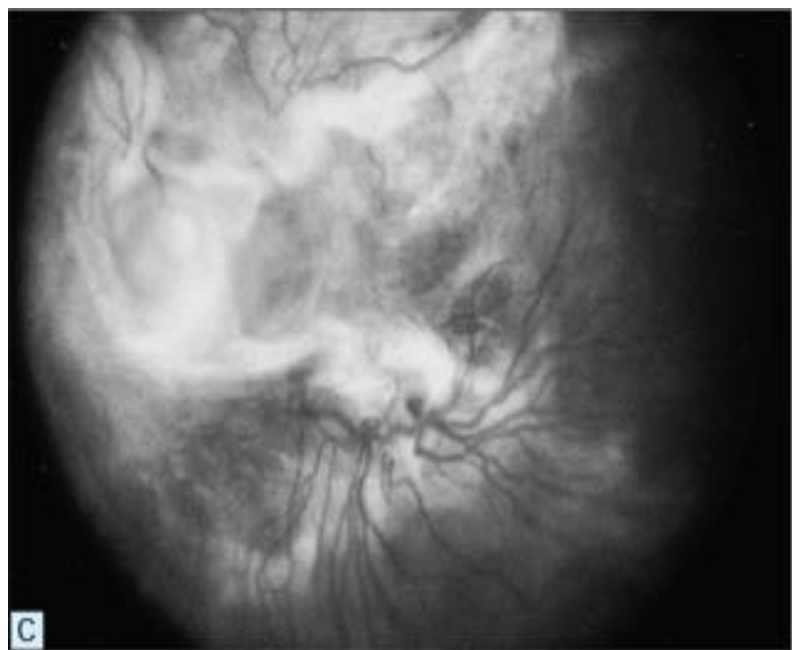


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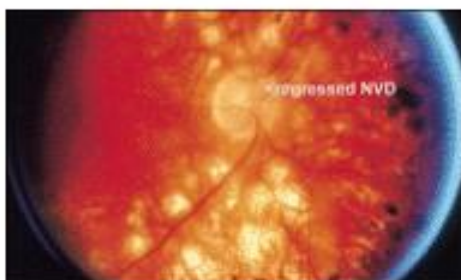
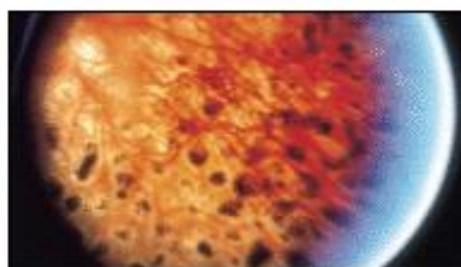
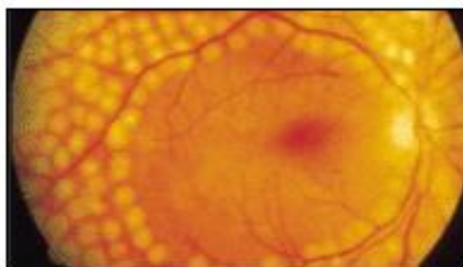
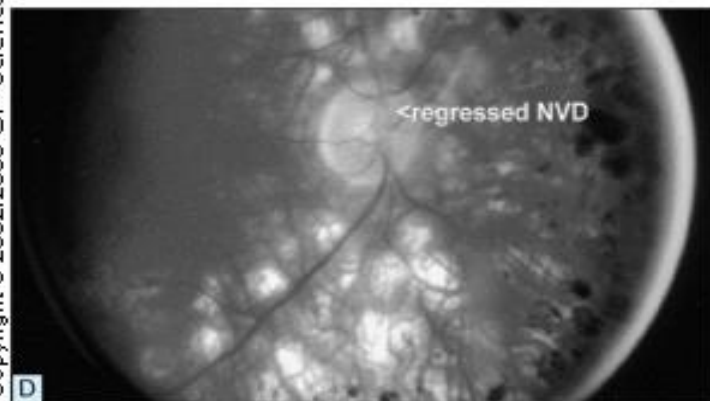
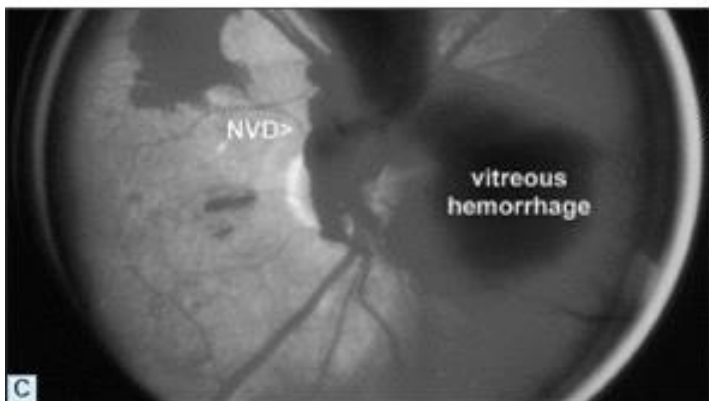
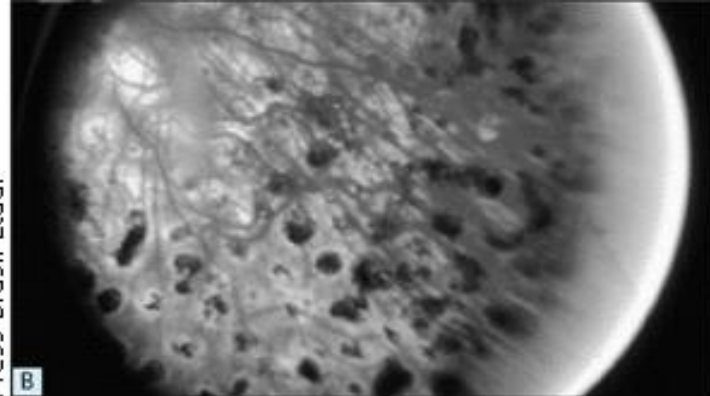
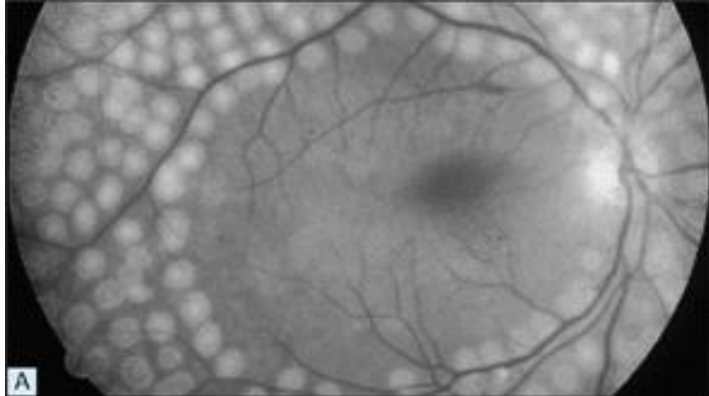






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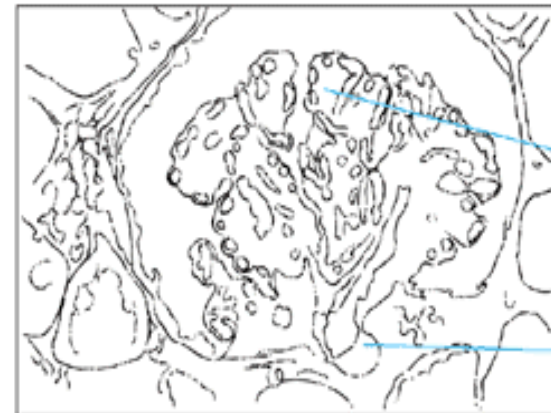
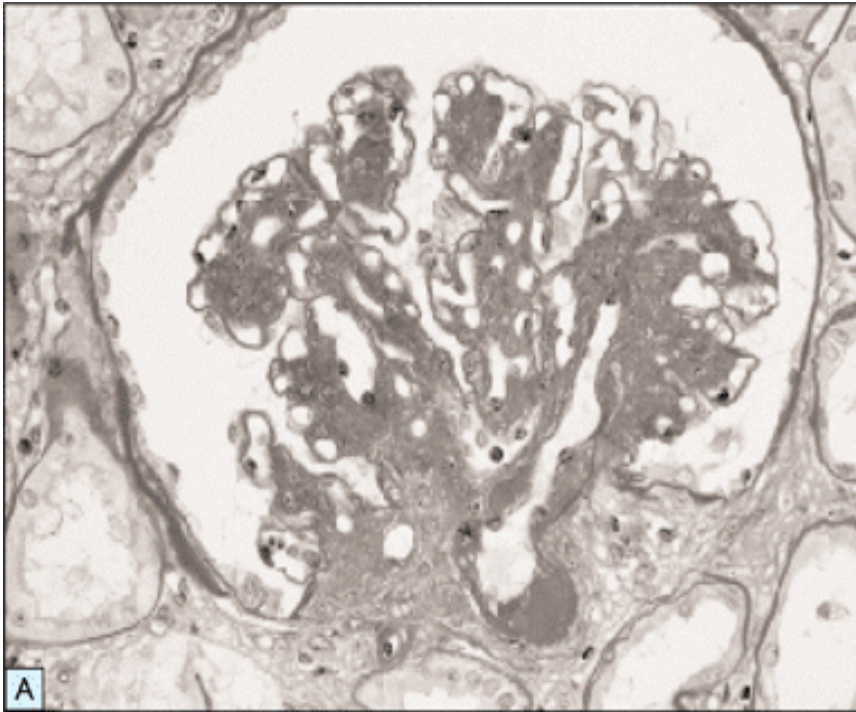
# **FATORES SISTÊMICOS AGRAVANTES DA RETINOPATIA**

- **Controle DM inadequado**
- **Hipertensão**
- **Doença renal**
- **Dislipidemia**
- **Gravidez**
- **Tabagismo**
- **Anemia**

# DM

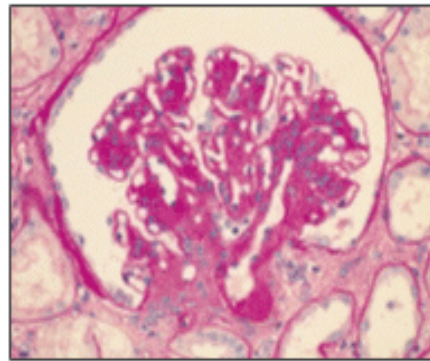
## Complicações Crônicas Microvasculares

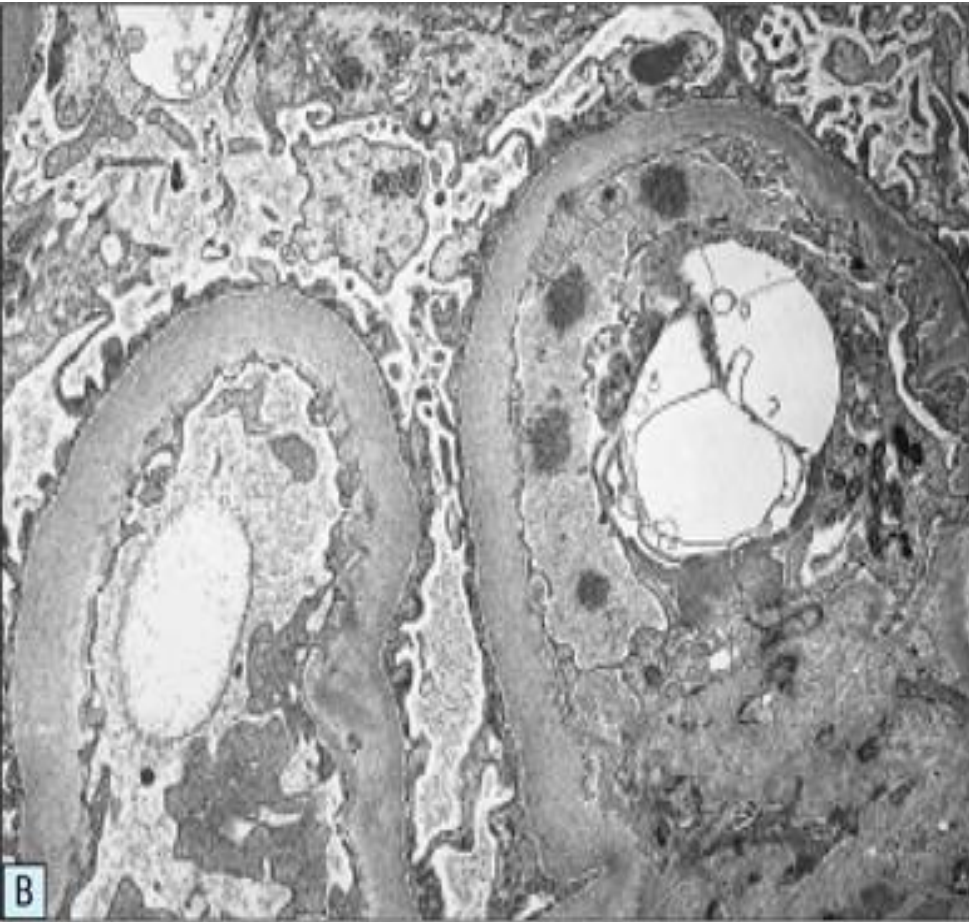
- Retinopatia
- Nefropatia



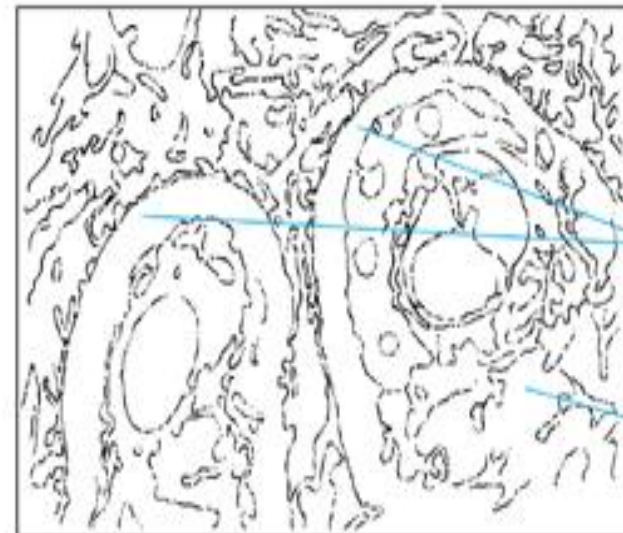
Expansão  
mesangial  
e esclerose

Deposição hialina  
na arteriola  
aferente





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Membrana basal  
espessada

Expansão mesangial

Duração  
do diabetes

Albuminúria

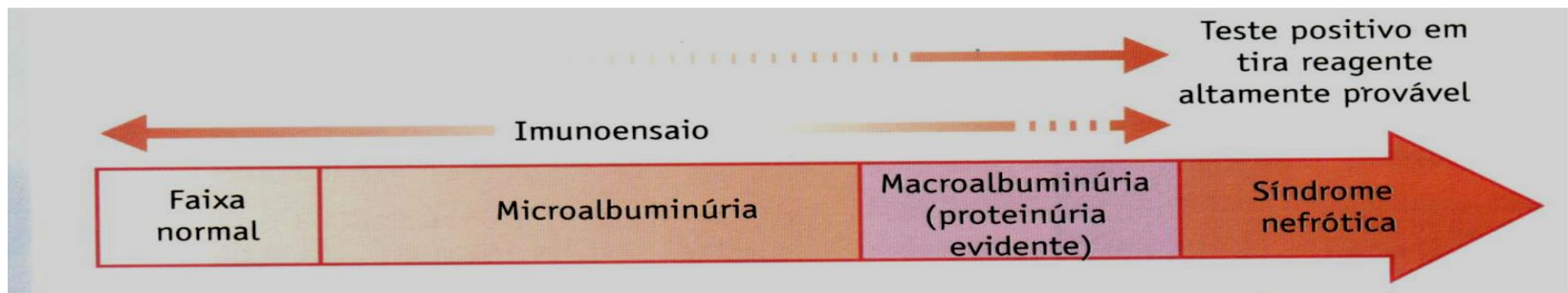
Presença de  
retinopatia

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# HISTÓRIA NATURAL:

- NEFROPATIA INCIPIENTE:  
microalbuminúria persistente (20-200mcg/min ou 30-300mg/24h) em duas ou mais amostras
- NEFROPATIA CLÍNICA: macroproteínúria (albuminúria >300mg/24h) ou proteína urinária maior que 500mg/24h



# Causas comuns de aumento transitório na albuminúria

- Exercício
- Gravidez
- Mau controle glicêmico
- Insuficiência cardíaca congestiva
- Hipertensão
- Infecção de trato urinário

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**Controle  
rígido do açúcar  
no sangue**

**Controle  
da pressão  
arterial**

**Inibidor  
da ECA  
ou ARB**

**Dieta pobre  
em proteína**

**Controle lipídico**

# Complicações Crônicas

## Vasculares

### Macrov.

- ❖ A. coronárias
- ❖ A. cerebrais
- ❖ A. periféricas

### Microv.

- ❖ Nefropatia
- ❖ Retinopatia

## Neurológicas

### S. N. Periférico

- ❖ Sensitivo - motor
- ❖ Autonômico

# Neuropatia Diabética

## Conceito

**Distúrbio neurológico demonstrável clinicamente ou por métodos laboratoriais em pacientes diabéticos, excluindo-se outras causas de neuropatia.**



# Neuropatia Diabética

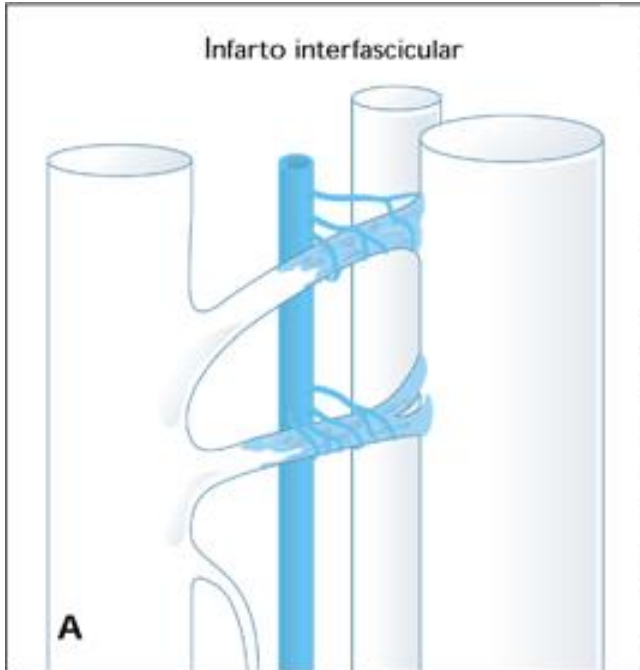
## *Classificação*

### Mononeuropatia

- ❖ Focal
- ❖ Multifocal
- ❖ Multiplexos
- ❖ Plexopatia

### Polineuropatia

- ❖ Sensitivo - motora
- ❖ Autonômica






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## Polineuropatia periférica



-  Hiperestesia
-  Sensação diminuída
-  Ausência de dor superficial



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# Neuropatia Diabética

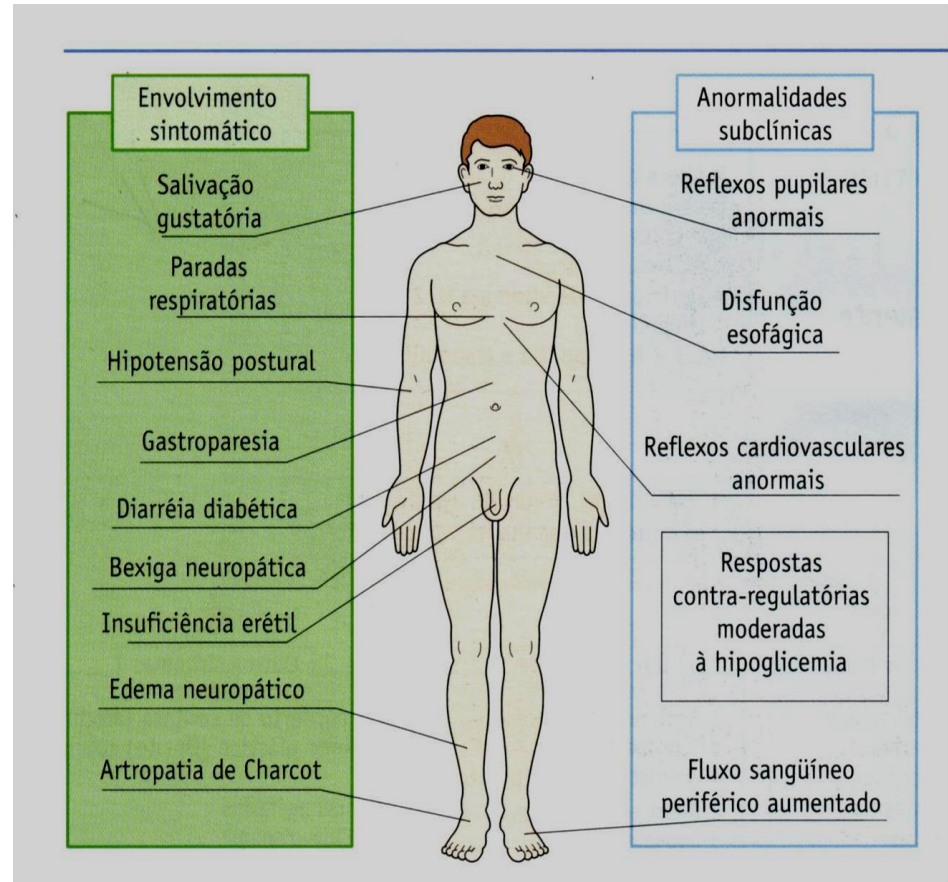
## *Testes Diagnósticos*

- **Sensibilidade**
  - ❖ **Dolorosa (agulha, palito)**
  - ❖ **Tátil (algodão, monofilamento 10g)**
  - ❖ **Vibratória (diapasão 128 Hz, bioestesiômetro)**
- **Reflexos tendinosos**



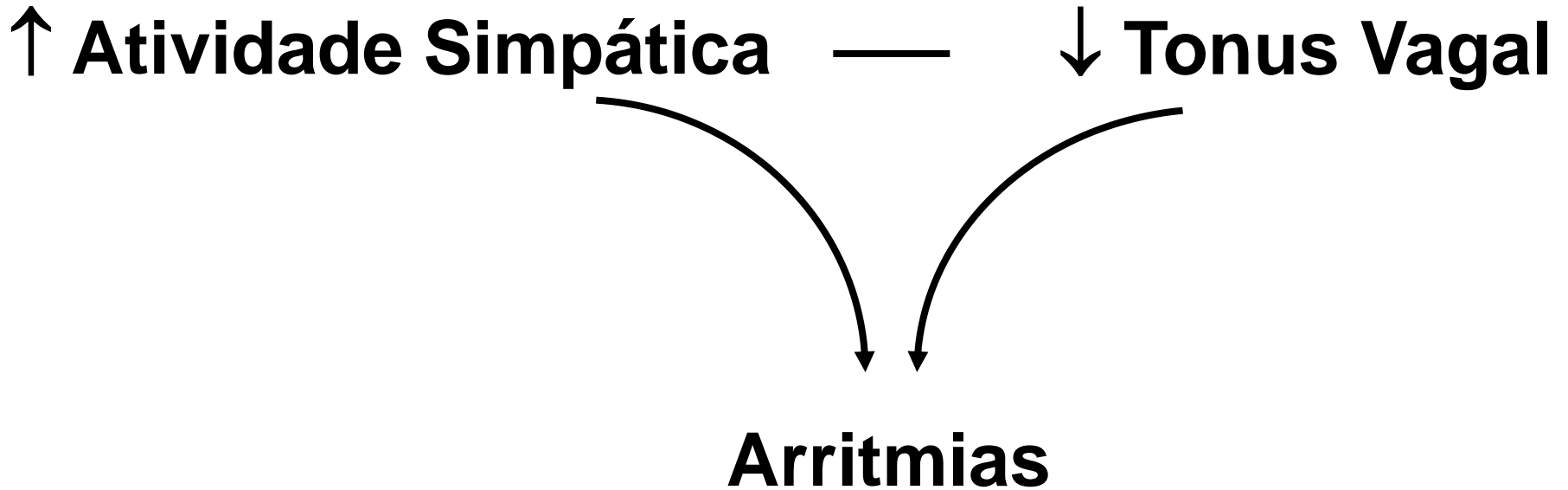
# FORMAS CLÍNICAS

- Neuropatia autonômica



# DM x NACV

## *Mortalidade/Morbidade*



# **GASTROPATIA DIABÉTICA**

## ***Manifestações Clínicas\****

- **Náuseas e vômitos**
- **Saciedade precoce**
- **Plenitude epigástrica**
- **Glicemia de difícil controle**

✧ **Muitos casos são assintomáticos**

# DIARRÉIA CRÔNICA DO DIABÉTICO

## *Características Clínicas*

- **Intermitente ou contínua**
- **Dejeções volumosas (aquosas)**
- **Frequentemente à noite**
- **Associação com incontinência fecal**

# DIARRÉIA DO DIABÉTICO

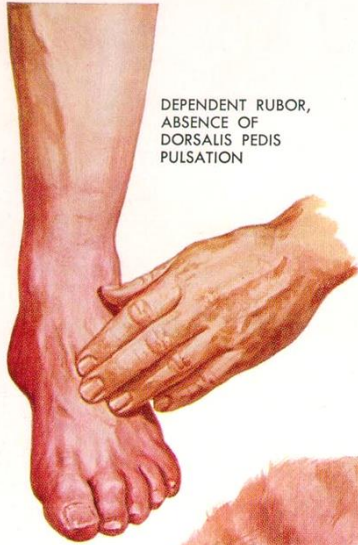
## *Mecanismos Etiopatogênicos*

- 1. Motilidade gastrointestinal (GI) anormal - trânsito GI rápido.**
- 2. Motilidade GI anormal - estase GI predispondo à proliferação bacteriana no intestino delgado.**
- 3. Má absorção de água e de eletrólitos**

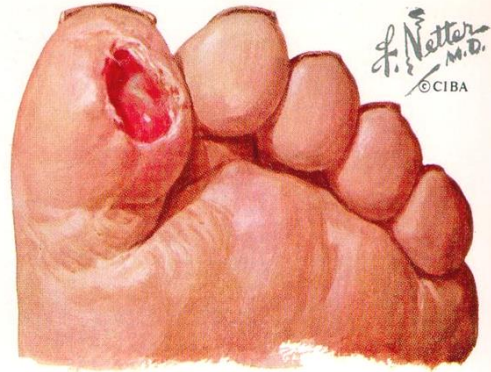


# PÉ DIABÉTICO

- Principal causa de amputação não traumática dos membros inferiores.
- Ocorre em decorrência de neuropatia, doença vascular periférica, lesões dermatológicas e deformidades da estrutura óssea e muscular

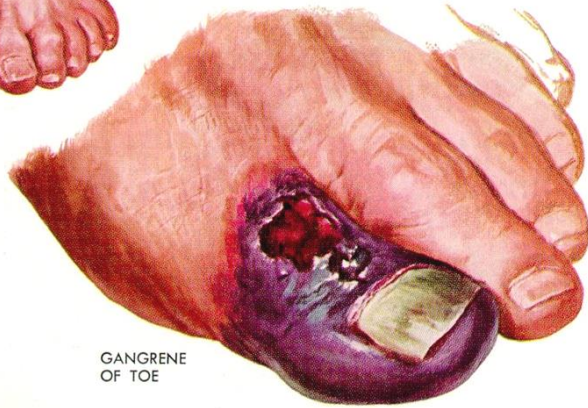


DEPENDENT RUBOR,  
ABSENCE OF  
DORSALIS PEDIS  
PULSATION



*F. Netter M.D.*  
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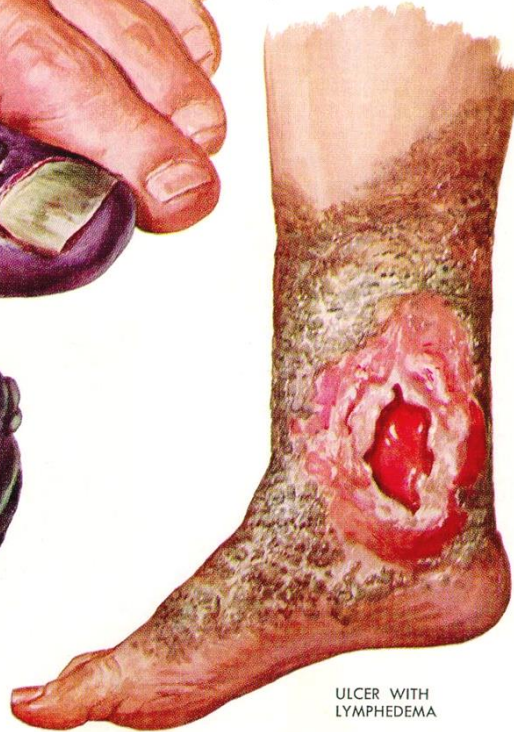
DIABETIC ULCER



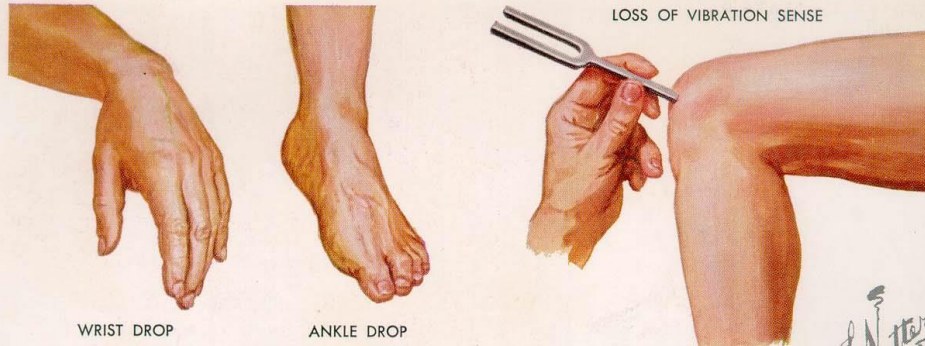
GANGRENE  
OF TOE



EXTENSIVE  
GANGRENE



ULCER WITH  
LYMPHEDEMA

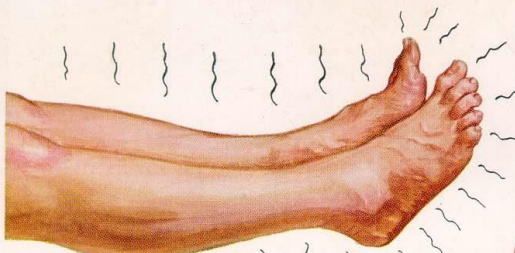


WRIST DROP

ANKLE DROP

LOSS OF VIBRATION SENSE

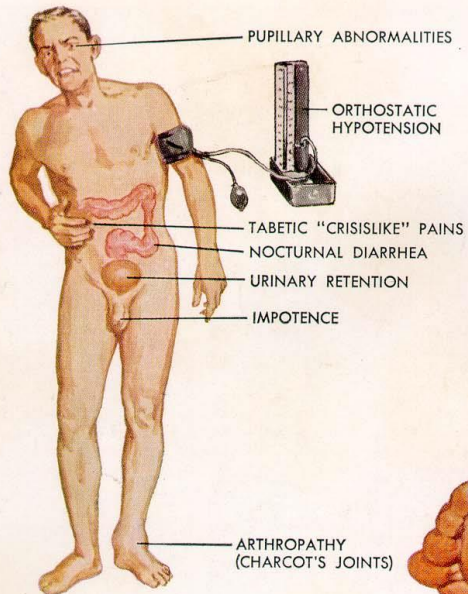
*H. Netter M.D.*  
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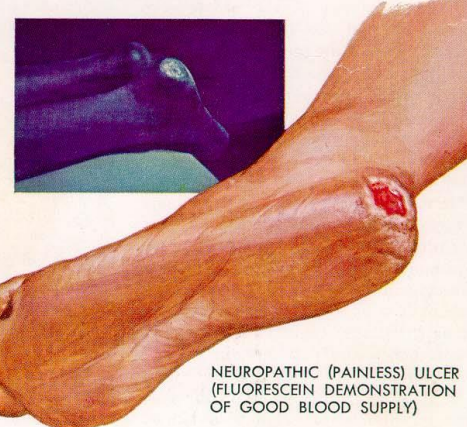
PARESTHESIA, HYPERALGESIA OR HYPESTHESIA



EXTRA-OCULAR MUSCLE PARALYSIS  
(PTOSIS, STRABISMUS, DIPLOPIA)



AUTONOMIC DYSFUNCTIONS



NEUROPATHIC (PAINLESS) ULCER  
(FLUORESCIN DEMONSTRATION  
OF GOOD BLOOD SUPPLY)

**FIM**