**RAYNAUDS**

**Workup:**

Our approach to assessing Rayanud's is as follows:

PRIMARY : No evidence of any associated disorder

- 15-30 yrs
- Women >> men
- May have family history
- Symmetric attacks
- No tissue injury
- Normal capillary nailfolds
- Negative ANA; normal ESR

SECONDARY ? Associated with other disorders

- Later age 35yrs+
- Consider esp in men
- Asymmetrical
- Tissue damage
- Abnormal blood results
- Abnormal nailfold microscopy

Secondary causes include:

- Connective tissue disorders:
- Scleroderma (systemic sclerosis) ? skin, swallowing
- Systemic lupus erythematosus (SLE) - rashes
- Polymyositis / dermatomyositis - weakness
- Sjogrens syndrome - sicca
- Vasculitides ? night sweats fevers
- Occupational, cold, vibrating tools, chemicals
- Drug induced
- Obstructive / embolic , paraproteins
- Miscellaneous ? extra rib, ergot

**Other mimics of Raynaud's**

CRYOGLOBULINS (circulating proteins that become insoluble at reduced temperatures)

Cryoglobulins (CG) consist of immunoglobulins and complement components and are associated with

- mycoplasma pneumonia,
- multiple myeloma,
- certain leukemias,
- primary macroglobulinemia,
- autoimmune diseases, such as systemic lupus erythematosus and rheumatoid arthritis.
- chronic hepatitis C infections
- COLD AGGLUTINS (IgM antibodies (rarely IgA) directed against polysaccharide antigens on the red blood cell surface ).
  Associated with:

1. - autoimmune hemolytic anemia
2. - response to infection or by paraneoplastic or neoplastic growth of a single immunocyte clone.
3. - Mycoplasma pneumoniae (primary atypical pneumonia) and infectious mononucleosis
4. - Anaemia plus blue extremities on cold exposure

**Investigations**

- Ds DNA, ENA, Hep C,
- cold agglutinins,
- cryoglobulins
- SPEP

**MANAGEMENT**

Non pharmacologic approaches are the mainstay of treatment

Placebo can reduce frequency of attacks by up to 40%

AVOID cold and sudden temperature change

Wear gloves, but also keep rest of body warm.

Avoid smoking

Here is the approach that I use:

1. Calcium channel blockers
    - Nifedipine retard (Adalat) 10mg twice a day increasing to 20mg twice a day
    - Nifedipine LA 30mg daily
    - Amlodipine 5-10mg daily
    - Diltiazem 60mg three times a day

If that fails we change to:

2. Angiotensin converting enzyme inhibitors

Usually started at low doses to prevent any blood pressure problems

- Captopril 6.25mg (test dose very small), then starting at a dose of 12.5mg twice a day (max 25mg twice a day)
- Enalapril 5mg starting dose, increasing to 10mg-20mg daily
- Lisinopril 2.5mg starting dose, increasing to 10mg-20mg daily
- Quinapril 5mg starting dose increasing to 20mg daily

or Angiotensin II receptor antagonists

- Losartan 25mg daily, increasing to 50mg daily
- Valsartan 40mg daily, increasing to 80mg daily

3.Serotonin re-uptake antagonists

Fluoxetine 20-40mg daily. Note this drug is also used to treat depression in other patients. Its use in Raynaud?s is to dilate the peripheral blood vessels Other members of the group that can be tried are:

Sertraline 50mg daily increasing to a maximum of 200mg (doses of 150mg or greater should not be used for more than 8 weeks)

4. Other drugs and alternative treatments

GTN patches: for the acute situation. A dose of 0.2mg/hr (5mg patch) to start with, increasing to 0.4mg/hr (10mg patch) if required. There must be a 12 hour period each day, free of drug to prevent nitrate tolerance (the drug no longer working)

Sildenafil is a drug I have used lately with significant success but it is not paid for for through OHIP and is expensive. Requires a specific application. It can be there as an option