

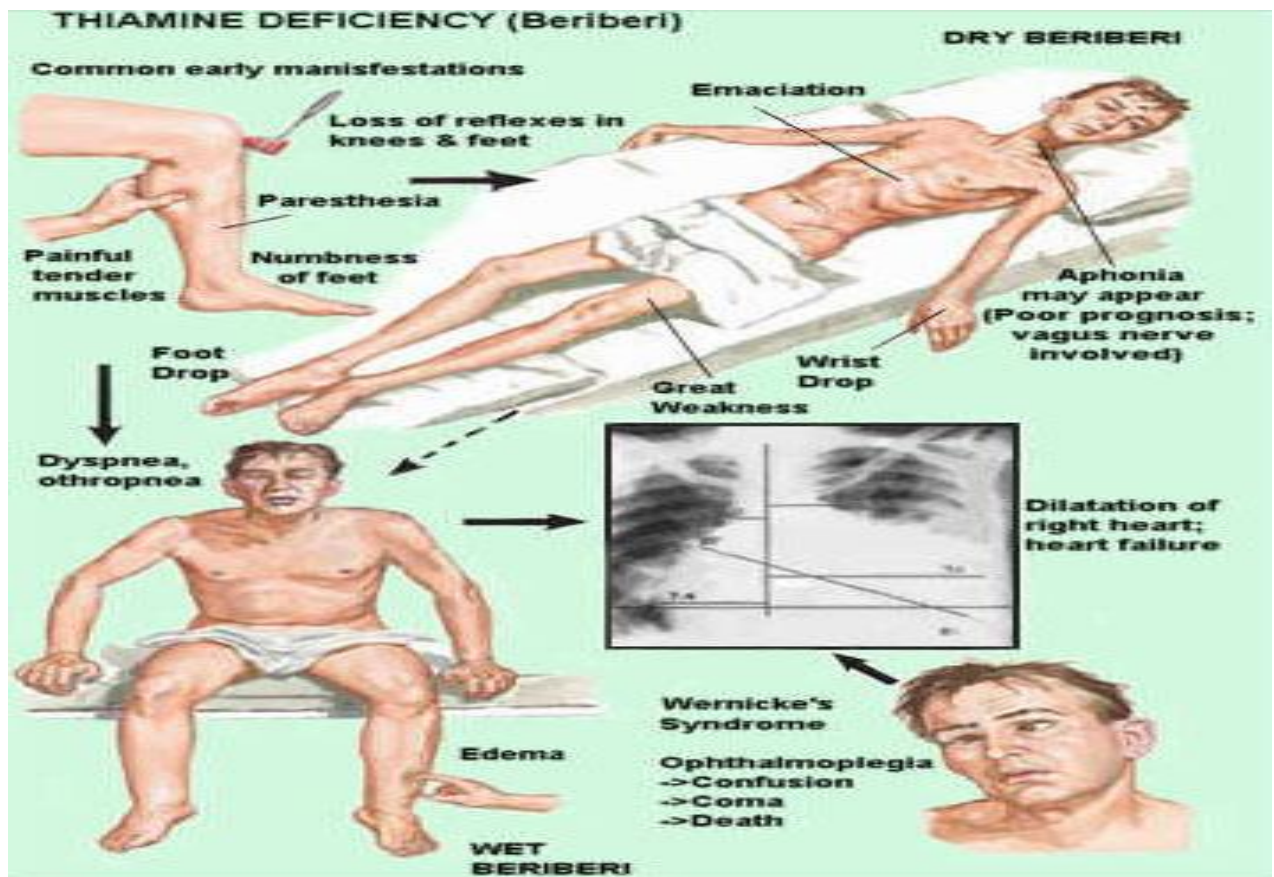
Vitamin –B complex deficiency disorder

Thiamine – B1 deficiency

Beriberi – 1. Wet beriberi – cardiovascular involvement.

2. Dry beriberi – Nervous system involvement.

In the absence of thiamine cells can not metabolized glucose aerobically.



Clinical Feature –

Cardiac symptoms-

- 1. High out put state due to peripheral vasodilatation.**
- 2. Edema due to retention of sodium and water**
- 3. Biventricular failure**

Neurological symptoms

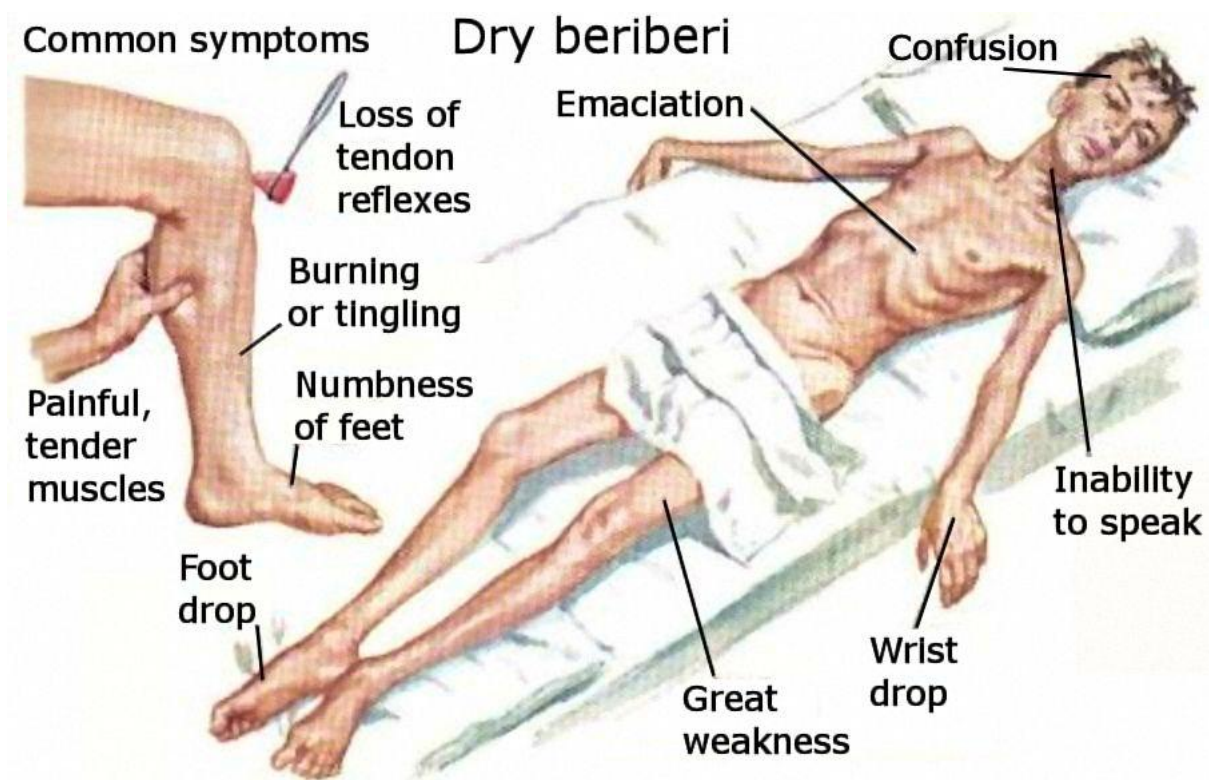
- Peripheral neuropathy - impairment of sensory, motor and reflex function**

Investigation

- Low blood thiamine level
- Raised pyruvate (enzyme in blood) and lactate level

Management

- **Dry beriberi** – 50 mg thiamine IM daily for several days followed by 2.5 - 5 mg orally for maintenance.
- **Wet beriberi** – 25 -100 mg IV.



Riboflavin – B2

Symptoms –

- sore throat,
- glossitis,
- angular stomatitis/cheilosis (inflammation and small cracks in corners of mouth)

Management – Tab. Riboflavin- 5 mg tid

Niacin B3

Synonym: nicotinic acid, nicotinamide, antipallegia vitamin

Clinical feature – 3 D's-

- Dermatitis,
- Diarrhea,
- Dementia

Treatment -

Nicotinamide 100 mg. tid or 100mg im/iv for 2 weeks followed by 10 mg od

Pyridoxin B6

Clinical feature –

- Glossitis,
- Angular stomatitis,
- Neuropathy

In certain genetic disorder, B6 metabolism is abnormal & in these infants pyridoxine deficiency causes convulsion and later sideroblastic anemia.

Management – Pyridoxin - 30mg/day

However high dose 100mg/day is required in penicillamine therapy.

Cyanocobalamin –B12

Clinical feature –

- Megaloblastic anemia /pernicious anemia)
- Neurological degeneration
- Peripheral neuropathy
- Optic atrophy

Treatment –

In megaloblastic anemia-100 mcg/day orally

If not absorbed 1000mcg. Of hydroxocobalamin IM once a week for 3-4 weeks. There after 4 mcg is continued.