

February 22, 1962

PELLAGRA

CASE I. [REDACTED] 31 yr. old C W - Admitted [REDACTED] 1960

This 31 yr old [REDACTED] was brought to [REDACTED] by relatives because of vomiting, a skin eruption and mental confusion. About 6 years ago the patient first developed episodes of intermittent post prandial vomiting. For the past one and a half years these episodes were more frequent, and in the past 8-10 months the patient stopped taking solid food, living mainly on orange juice, tomato juice and wine.

Three months PTA a rash appeared on her hands and feet and gradually progressed centrally to involve her arms, legs and abdomen. These lesions started as vesicles or bullae which later burst and became dry and scaly. Associated with this was numbness and tingling of the hands and feet. It was noted that the skin condition worsened on exposure to sunlight.

Concomitant with the appearance of the rash, the relatives noted that the patient became progressively more confused and irrational. Other pertinent history included weight loss of considerable magnitude over the past 6 years, amenorrhea for the past 2 years and the recent disappearance of pubic and axillary hair. Within the month PTA the patient had taken 30 vitamin pills which contained B₁₂, thiamine and riboflavin. No niacin was present in this particular vitamin preparation.

PX revealed an emaciated, cachectic, confused woman in no acute distress. TPR were normal and she weighed 72 lbs. The skin of the arms, hands, axilla, feet, legs, back, buttocks and abdomen were covered by a scaly, cracking eruption which had an erythematous base. The tongue was beefy red and showed atrophic papillae at the edge. The liver was felt 3 F ↓ C M. The neurological examination was negative save for obvious mental confusion.

Shortly after admission on [REDACTED]-60 she was placed on nicotinamide alone and on a liquid diet. Within three days obvious improvement both in the skin condition, mental status and appetite were evident. Improvement continued to be dramatic and on [REDACTED] the patient was placed on multivitamins, B₁₂ and a high protein diet. During her hospital stay she gained 26 lbs.

CASE II. [REDACTED]

A 42 yr old CM was admitted to [REDACTED] in [REDACTED] 1960 because of dermatitis, stomatitis and glossitis. This [REDACTED] had a long history of chronic alcoholism (wine) and a poor dietary intake. In April he noted the appearance of a dark scaly rash over his forearms. About one month later he developed soreness and redness of his mouth and tongue. This was soon followed by dysphagia, nausea and vomiting and a weight loss of 20 lbs. Physical examination revealed crusted mucous membranes in his nose and an atrophic red tongue with irregular crusted areas. The breath was foul, the gingiva inflamed and the hypopharynx was erythematous. Skin of the

forearms was thick, scaly, and darkly pigmented. Diarrhea was present in the hospital prior to therapy. Neurological examination revealed hypoactive but equal deep tendon reflexes.

Treatment consisted of a 100 gm protein diet, 100 mg of nicotinamide BID, and Brewers yeast. Within 5 days there was marked improvement in his skin and mucous membrane lesions. Within 10 days he was well and had gained 14 pounds.

RECENT HISTORY OF PELLAGRA, BLACKTONGUE AND IDENTIFICATION OF NIACIN AS THE P - P FACTOR

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CORN AND PELLAGRA

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Toxin in Corn

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ROLE OF THE B VITAMINS IN THE TRYPTOPHAN - NIACIN INTERRELATIONSHIP

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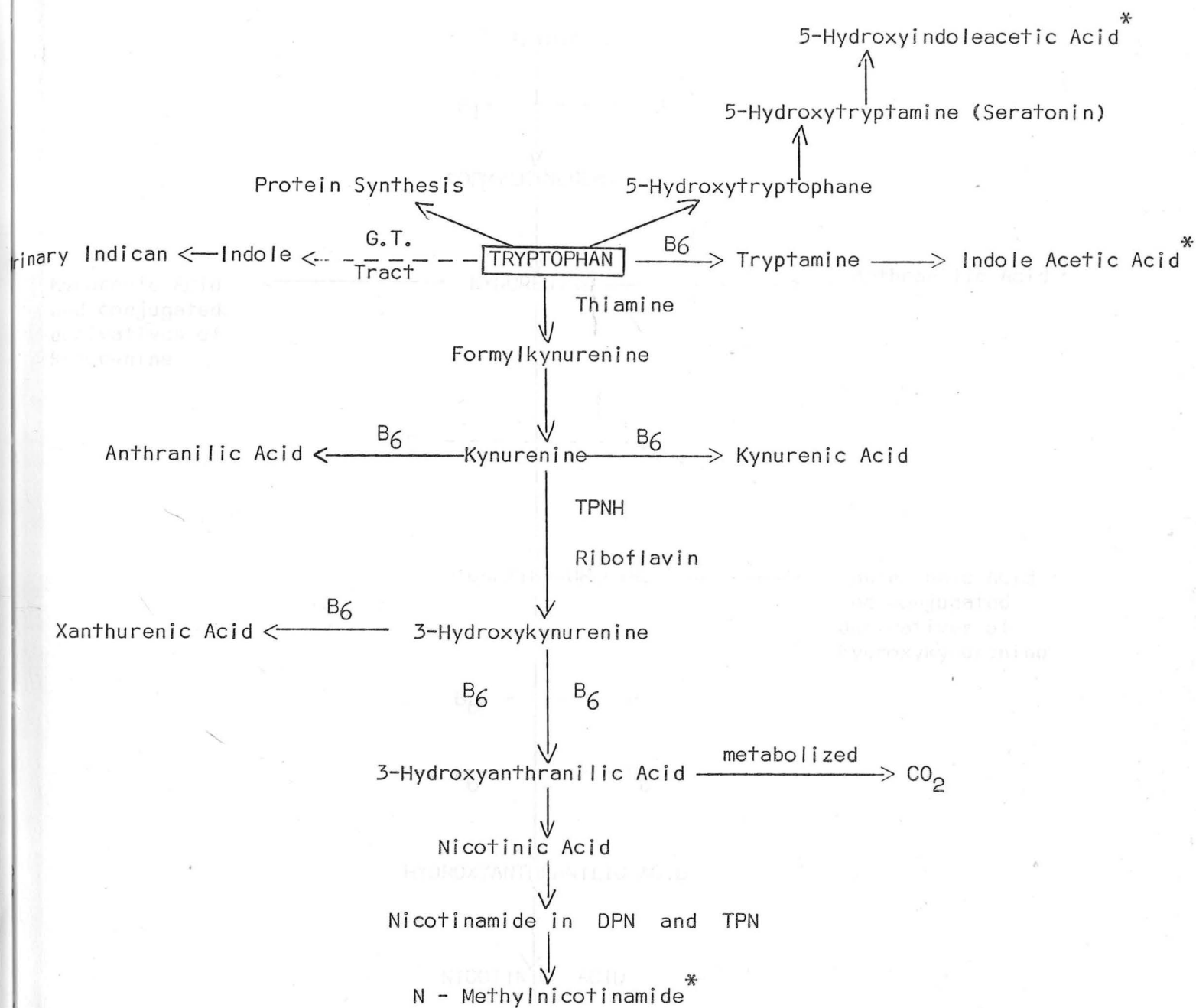
6 - MERCAPTOPURINE AND PELLAGRA

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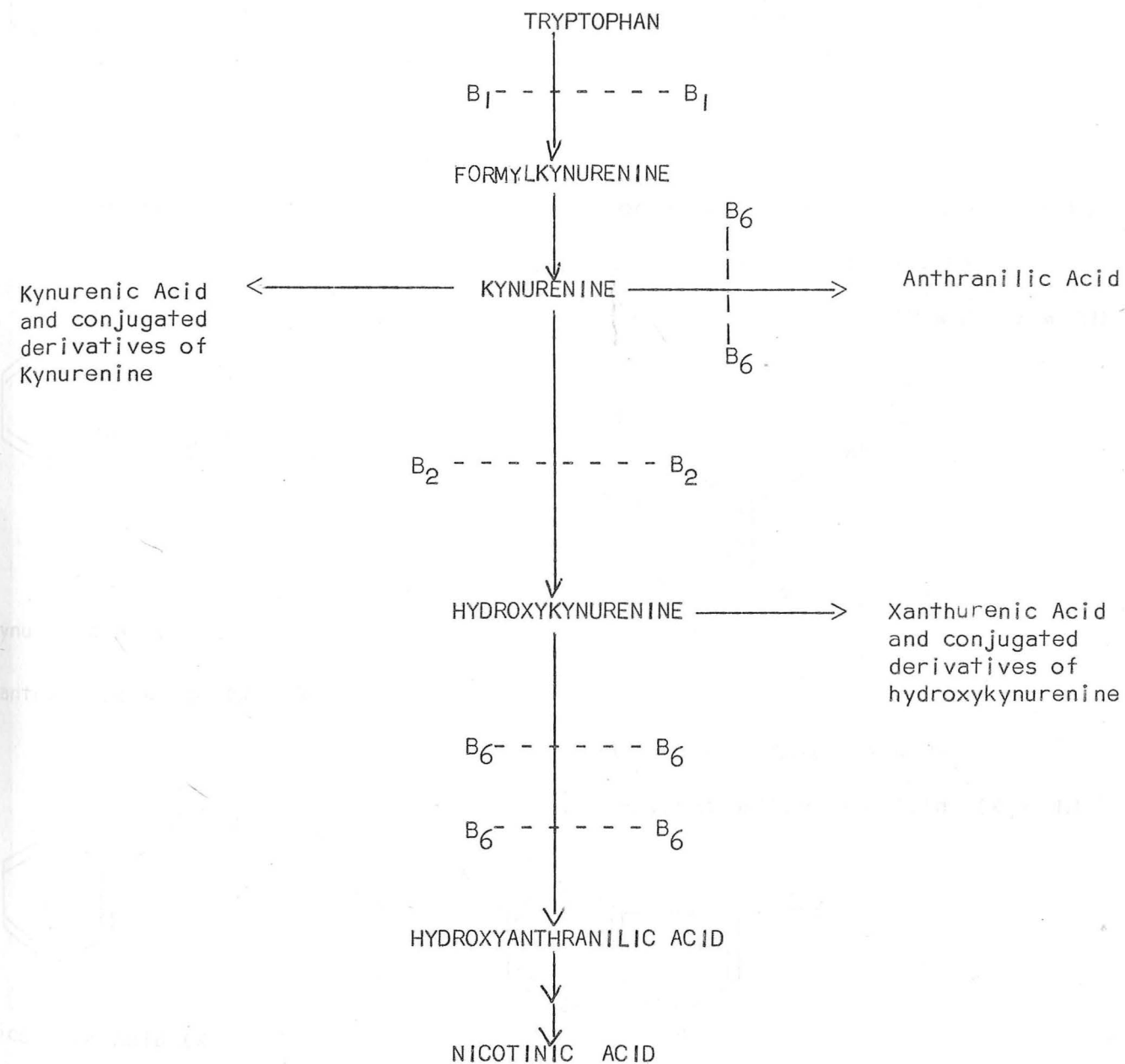
CARCINOID AND PELLAGRA

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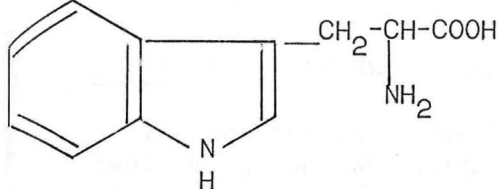
METABOLIC PATHWAYS OF TRYPTOPHAN



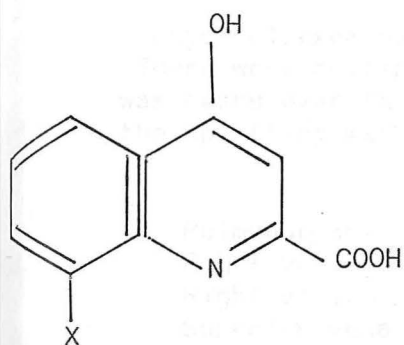
B -VITAMINS AND TRYPTOPHAN METABOLISM



STRUCTURAL FORMULAE

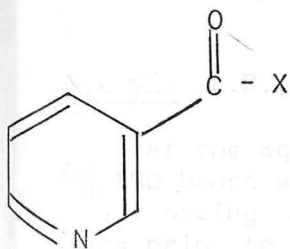


Tryptophan



Kynurenic Acid (X = H)

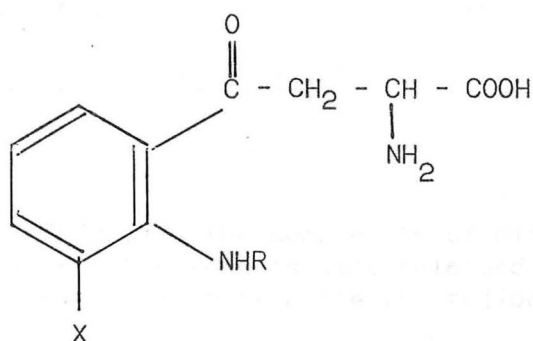
Xanthurenic Acid (X = OH)



Nicotinic Acid (X = OH)

3-Acetyl pyridine (X = CH₃)

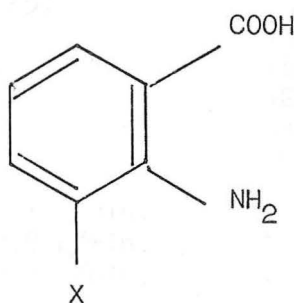
Nicotinamide (X = NH₂)



Formylkynurenine (R = CHO; X = H)

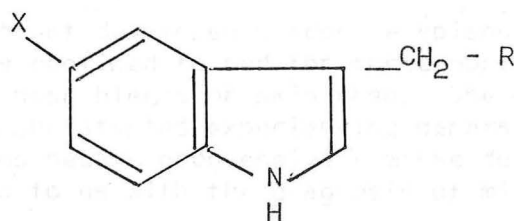
Kynurenine (R = H; X = H)

3-Hydroxykynurenine (R = H; X = OH)



Anthranilic Acid (X = H)

3-Hydroxyanthranilic Acid (X = OH)



5-Hydroxytryptophan (R = CH(NH₂)-COOH; X = OH)

5-Hydroxytryptamine (R = CH₂-NH₂; X = OH)

5-Hydroxyindoleacetic Acid (R = COOH; X = OH)

Tryptamine (R = CH₂-NH₂; X = H)

Indoleacetic Acid (R = COOH; X = H)