

LEUCOMELANODERMIA

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The skin is a large and vital organ with numerous complex functions indispensable to the health and survival of the individual. Many extensive structural and functional disorders of the skin give rise to serious (systemic) disturbances such as pigmentary.

The normal colour of the skin depends on the thickness of horny layer, circulation, reduced circulatory volume, presence of oxyhaemoglobin in superficial vessels and presence of other pigments in the skin and subcutaneous tissue. The most important pigment is melanin and its disintegratory product melanoid. A yellow brown colouration is produced by melanin granules present in the upper dermis. While a blue-black tinge occurs when the pigment is in lower dermis. The racial and constitutional differences which occur in the skin pigmentation depend on the quantity of melanin present in the skin. The deficiency of melanin causes curious condition known as leucoderma or leucomelanoderma. There may be partial or complete absence of melanin. Normally melanin in human skin is very small. Excess of melanin causes the darkness of skin. It is much greater in the negroes than in the white man. According to Dr. Bloch, "Even in the negro, the entire skin does not contain more than one gram of pigment."

Melanin is produced by melanoblasts, the branched dendritic cells situated in the basal cell layer of the epidermis derived from the neural crest. Melanin is formed from tyrosine (amino acid) by the action of enzyme tyrosinase. A copper protein complex is present in the melanoblasts or melanocyte. Melanocyte also contain dopase, the oxydising enzyme which changes chromatin precursor substance dopa (dihydrooxyphenylalanine) into insoluble chromatic substance, dopa melanin. Actually copper of tyrosinase convert tyrosine into dopa in the presence of molecular oxygen. Once the reaction has started dopase acts as an accelerator and dopa is transformed into dopa-aquinone which in its turn is transformed into iodolic compounds before melanin is formed.

Any condition which inhibits the activation of tyrosinase may cause melanin deficiency. Aetiology of leucoderma is quite unknown both toxically and trophoneurotically. Generally it is seen that any gastric derangement may cause leucoderma because both copper ion and action of ascorhic acid are essential for normal pigmentation. Copper deficient diet or any other cause removes the copper ion and causes gastric derangement and lastly causes depigmentation such as sulphur containing compound thiouracil. Injuries and burns are also the causes for depigmentation.

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Leucoderma may occur at any age and in either sex. It may be congenital or acquired. Congenital condition manifests at birth and it may be partial or complete. Congenital form is known as *albinism*. In it usually skin is milky white, blood vessels are seen through transparency of skin while the acquired condition is known as *vitiligo* found in patches or spots although the margins are hyperpigmented.

The disease is found principally in the tropics and among the coloured races. At first the patches are small but gradually increase in size. The spots are perfectly white. The disease spreads slowly. There is as a rule, no impairment in the general health except mental conditions as would naturally develop from the disfigurement.

TREATMENT

"When names of diseases are mentioned it is always to be understood that the name counts for nothing unless the symptoms are covered with the remedy. If there were no names there would be no routinism, which so often stands in place of good prescription."—E. B. Nash.

The drugs principally related to white or milky white discolouration of skin are:

White: Apis, Arsenic, Calcarea, Carbo veg., Fluoric acid, Kali carb., Lachesis, Sumbul.

Spots: Alumina, Ammonium carb., Arsenic, Aurum, Berberis, Calcarea, Carbo animalis, Coca, Mercurius, Natrum carb., Nitric acid, Phosphorus, Sepia, Silicea, Sulphur.

Becoming bluish: Calcarea.

With dark border: Calcarea.

The list of medicines given above is not exhaustive and not on specific line. Study of materia medica is the sheet anchor before prescribing, after matching the totality of symptoms.
