3.3.9 Hepatic Function

The hepatic function is disturbed by toxins of intestinal parasitism. Liver extract could help cure leucoderma, due to presence of tyrosine and Cu.

3.3.10 Gastric Acidity

There was apparent achlorhydria in leucoderma patients. Gastric acidity in 50% of cases was noticed.

3.3.11 Synthesis of Melanin

In vertebrates, melanin synthesis or melanogenesis is a specialized function expressed only in the differentiation products of neural crest–derived cells called melanocytes, widely distributed in the skin, hair follicle roots and other places of the body, such as eyes and the ears (Blanpain et al. 2004; Steingrímsson et al. 2004). Melanogenesis occurs through an enzymatic process, catalysed by tyrosinase (albino locus) and tyrosinase related protein (TRP)-I (b-locus protein/gp75) as well as TRP-2 (DCT/slaty locus protein), which convert tyrosine to melanin pigments (Cape et al. 2002; Huang et al. 2002; Kemp et al. 1998; Vance et al. 2004). The melanocytes in the skin localize the basal layers of the epidermis and hair bulbs, where they contact many adjacent keratinocytes through their dendritic processes (Caixia et al. 1999; Steingrímsson et al. 2005; Zhang et al. 2005). Melanin pigment is initially synthesized and contained in subcellular organelles (melanosomes) in melanocytes and then transferred to keratinocytes, where they shield the nucleus from damaging ultraviolet light. In this position, melanin effectively absorbs ultraviolet light (UV), penetrating the skin and preventing consequential DNA damage. The loss of skin pigmentation can result in various types of hypopigmentary disorders in human skin, which leads to psychological, social and interpersonal problems. The degree of visible skin pigmentation determines the amount, size and types of melanin produced by melanocytes residing at the junction of the epidermis and dermis, and the subsequent distribution of that pigment by keratinocytes to the surface. A defect at any stage of the complex procedure of proliferation and/or function of melonocytes and/or keratinocytes can contribute to the pigmentary disorder. Visible pigmentation in humans results from the synthesis and distribution of melanin in organs such as the skin, hair follicles and eyes. The pigment melanin plays a crucial role in the absorption of free radicals generated in the cytoplasm, shielding the host from various types of ionizing radiation, including UV light. Cellular melanisation is a process, which has been described as a fine stress regulatory mechanism linked to growth arrest involving a signalling cascade of stress-activated protein kinase (SAPK).

3.4 AVAILABLE TREATMENT OF LEUCODERMA

The existing treatment modalities of leucoderma are as follows.