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Traditional uses of medicinal plants of *Solanum nigram* Linn. remedies on Vitiligo

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Abstract
The aim of the study was conducted from March 2014 to June 2015 to investigate the uses of medicinal plants by the yadava community in Tirunelveli District, Tamil Nadu, South India. The traditional medicine of plants information was gathered from the head of the traditional healers. The information of the present report the extract of *S. nigrum* was displayed a significant result of the regeneration of melanocytes in vitiligo affected skin area.

Keywords: Yadava community; Traditional medicine; Vitiligo; *Solanum nigrum* Linn.; Solanaceae

Introduction

Vitiligo is a skin disease that has been known about for at least 5000 years. **It** is an acquired skin disorder characterized clinically by totally white macules, or "spots," and microscopically observed in the total absence of pigment producing cells in the skin called melanocytes. Now, Vitiligo appears to affect at least 1% to 2% of the total population. Vitiligo results from a number of factors, autoimmune, neurotrophic (interaction of melanocytes and the nervous system), and toxic (substances formed as a part of the normal melanin production actually being toxic to melanocytes) hypotheses have been advanced. The mechanism involves progressive destruction of selected melanocytes, probably by cytotoxic T-cell lymphocytes.

Medicinal plants have been used for treatment of different disorders particularly vitiligo. *In vitro* and *in vivo* research on various medicinal plants, which used in traditional medicine of medicinal plants and their phytochemicals viz., polysaccharides, flavonoid, tannin, saponin, lignin, alkaloid etc., which are responsible for this effect with different mechanisms (Ahvazi *et al*., 2004). Usha Singh and Satya Narain, (2008)**,** reported that latex of *Telosma pallida* (Roxb.) Craib. and paste of *Launaea asplenifolia* (Willd.) Hook. f. against leucoderma.

Solanum nigrum Linn belongs to the family Solanaceae, which is a widely distributed in the South Asia, Europe, Africa, Australia and American, but it is originally native of Eurasia. In India, it is found in Tamil Nadu, Kerala, Andhra, Shimla, Uttar Pradesh, Uttarakhand, and in many other regions. It grows as a weed with agricultural crops. It is **c**ommon name is black nightshade; Hindi name: Makoi and Tamil- Mnathakkali. *Solanum nigram* L. is used for both culinary and medicinal purposes**.** Ethnomedical properties and uses of antiseptic, antiinflammatory, expectorant, cardiotonic, digestive, diuretic, laxative, diaphoretic, sedative, swelling, cough, asthma, in curing cardiopathy, leprosy, haemorrhoids, nephropathy, ophthalmopathy, dropsy and general debility. Protective effect on the liver and hepatoprotective activity in cases of toxicity induced by drugs and chemicals. It is also effective in the treatment of cirrhosis of the liver. Fresh juice of this herb is used for curing fever and alleviating pain (Solanum, 2006).

Phytochemical analysis of *S.nigrum* possesses various compounds that are responsible for diverse activities. The major active components are glycoalkaloids, glycoproteins, and polysaccharides. It also contains polyphenolic compounds such as gallic acid, catechin, protocatechuic acid (PCA), caffeic acid, epicatechin, rutin, and naringenin (Sikdar and Dutta, 2008). Six compounds were isolated and identified as (+)-pinoresinol (I), (+)-syringaresinol (II), (+)-medioresinol (III), scopoletin (IV), tetracosanoic acid (V) and beta-sitosterol (VI). (Zhao *et al*., 2010).

Photo A: Habit of *Solanum nigrum* Linn

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Photo B: Fruits of *Solanum nigrum* Linn

Materials and Methods

The study was conducted from March 2014 to June 2015 to investigate the uses of medicinal plants by yadava community in Tirunelveli District. Information regarding traditional practitioners of yadava community live from three villages viz., Alwarkuruchi, Amboor, and Sambankulam in Tirunelveli district, Tamil nadu. Traditional knowledge of medicinal plants were collected from various sources. These practitioners were contacted personally along with known person from that area. Information regarding the herbal medicines used for treatment of vitiligo/ prevention of various diseases was collected though semi structured interview.

Results and Conclusion

In the present study was information gathering from yadava community in Tirunelveli District, Tamil nadu. The medicinal plants of *Solanum nigrum* was curing in the various diseases. The medicinal practitioner prepared the extract 25gms leaves of *S. nigrum* were added with 100ml of water and grinded for 10 minutes in mixi. The collected extract of *S. nigrum* was filtered and daily 50ml of extract orally administered for empty stomach in 30 days. The extract of *S. nigrum* was displayed a significant results of regeneration of melanocytes in vitiligo affected skin area. This results was information gathering from traditional healers of yadava community in Tirunelveli District, Tamil nadu. This is to information new to science. In conclusion, the results obtained confirm the traditional knowledge of treatment of Vitiligo. Previously, phytochemical studied on *S. nigrum* was reported (Sikdar and Dutta, 2008; Zhao *et al*.,2010). *S. nigrum* possesses various active compounds viz. glycoalkaloids, glycoproteins, and polysaccharides, gallic acid, catechin, protocatechuic acid (PCA), caffeic acid, epicatechin, rutin, and naringenin, (+)-pinoresinol (I), (+)-syringaresinol (II), (+)-medioresinol (III), scopoletin (IV), tetracosanoic acid (V) and beta-sitosterol (VI) that are active responsible compounds for vitiligo. Further study should be going on *in vivo* and *in vitro* investigation of drug development of vitiligo.

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