

Anti-cancerous properties & utility of *Sandpushpa* (*Catharanthus roseus*)**Pradnya Bhimrao Gurde (Jamdhade)*¹, Subhash Bhikaji Jamdhade²**

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Corresponding Author: Email: drpradnyajamdhade@gmail.com; Mob.: 9822709366*Abstract -**

In this fast running world lots of patients who has having different types of malignancies due to different causes like tobacco chewing, *kharrar* chewing, pesticides covering food, radiation, some chemical toxic food.

Cancer is a fatal disease. Cancer should be called symptom rather than disease. It indicates the abnormal, uncontrolled and rapid growth of cells. Because of this, cancer cell are malignant in nature. Cancer cell differ from normal biological cells mainly in two ways as long as the host alive, cancer cell are also alive and rapidly multiply themselves to form a new cancer cells. They do not die until host dies. But in case of ordinary cells, after cycle they decay automatically. Cancer cell can undergo 'metastasis.' The term metastasis means transfer of cancer cells from one organ of the body to another not directly connected with it. All malignant cells are capable of metastasizing which mean forming new loci in distant part of the body from original position. The role of cancer medicine is undoubtedly remarkable owing to the increasing scope and

complexity of cytotoxic Drugs. In this connection, a large number of them have been used with success. *Catharanthus roseus* (*Sandpushpa*) is one of the most important anticancer plants which are the most potent remedy against a particular type of cancer even today. So far, the only higher plant which is used as a source of patented anti cancerous drug is *Catharanthus roseus*.

Key words: Cancer, *Catharanthus roseus*, metastasis, *Sandpushpa*

Introduction-

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cancer cell are also alive and rapidly multiply themselves to form a new cancer cells. They do not die until host dies. But in case of ordinary cells, after cycle they decay automatically. Cancer cell can undergo 'metastasis.' The term metastasis means transfer of cancer cells from one organ of the body to another not directly connected with it. All malignant cells are capable of metastasizing which mean forming new loci in distant part of the body from original position. The role of cancer medicine is undoubtedly remarkable owing to the increasing scope and complexity of cytotoxic Drugs. In this connection, a large number of them have been used with success.

Aim & Objects -

Catharantusroseus (Sandpushpa) is one of the most important anticancer plants which are the most potent remedy against a particular type of cancer even today. So far, the only higher plant which is used as a source of patented anti-cancerous drug is *Catharantusraseus*. (संदपुष्पा)

Material & Method -

Sanskrit Name	<i>Sandapushpa</i>
Family	<i>Apocynaceae</i> (Kutajkula)
Latin Name	<i>Catharantusroseus</i> .
Hindi Name	<i>Sadabahar,</i> <i>Sadasuhagan</i>
Punjabi	<i>Ratanyot</i>
Marathi	<i>Sadafuli</i>
English	<i>Madagascar Periwinkle</i>
Rasa	<i>Tikta, Kashaya</i>

Vipaka	<i>katu</i>
Virya	<i>Ushana</i>
Guna	<i>Laghu, Ruksha</i>
Prabhava	<i>Rakta-arbud-nashana</i>
Doshaghanta	<i>Kapha-vat-Shanaka.</i>

It is widely established in the wild throughout tropical region of the world, commonly cultivated in garden and homes and grown commercially for the Pharmaceutical industry. In traditional medicine the periwinkle has been used to treat a variety of ailments because *catharantusroseus* contains more than 70 alkaloids. It has medicinal importance owing to the presence of alkaloids like-

<i>Vinblastine:</i>	$C_{46}H_{24}O_3N_3$
<i>Vincristine:</i>	$C_{21}H_{24}O_3N_2$
<i>Ajmalicine:</i>	$C_{21}H_{24}O_3N_2$
<i>Reserpine :</i>	$C_{33}H_{40}O_9N_2$
<i>Serpentine:</i>	$C_{21}H_{20}O_3N_2$
<i>Lochnericine:</i>	$C_{21}H_{24}O_2N_2$
<i>Catharanthine:</i>	$C_{21}H_{24}O_2N_2$
<i>Leurosaine:</i>	$C_{46}H_{58}O_9N_4$

In Ayurveda, the leaves, the seeds the flowers and the roots are used for treatment of Leukemia, menorrhagia. The root bark contain the alkaloids *Alsonine* which has been used traditionally for its calming effect and its ability to reduce blood pressure.

The anticancer drugs namely *Vincristine* and *Vinblastin* are produced from periwinkle. These two important alkaloids are present in *Catharantus* leaves.

- 1) The two alkaloids isolated from leaves are *vinblastine sulphate* (marketed as *Venban*) which is used for treatment of Hodgkin's disease and other lymphomas solid tumors.
- 2) *Vincristine sulphate* (marketed as *Oncovin*) which is used in the treatment of acute lymphocytic leukemia which arrest the mitosis in metaphase and other tumors of childhood.

More recently, extract from periwinkle have been shown to be effective in the treatment of various kinds of cancers, lymphomas Hodgkin's diseases, Breast cancer, acute lymphocytic leukemia, soft tissue sarcomas, multiple myeloma, neuroblastoma. Chemicals present in *Catharanthus roseus* may also prevent the growth of new blood vessels that support tumour growth. A high number of white cells in the blood indicates leukemia, so it is used against the cancer. Two of the alkaloids in *Catharanthus roseus* (*vinblastine* and *vincristine*) have been isolated and developed into prescription anti-cancer drugs. These injectable drugs and their derivatives such as *vinorelbine* work by preventing mitosis in metaphase. These alkaloids bind to *tubulin*, thus preventing the cell from making the spindle, its needs to be able to divide. This is different from action of taxol which interferes with cell division by keeping spindles from being broken down.

Discussion-

Vinblastine is an anti-mitotic drug used to treat certain kinds of cancer, including Hodgkin's lymphoma, on small cell lung cancer, breast cancer, head and neck cancer and testicular cancer.

Vincristine (brand name *oncovin*) also known as *leurocristine*, is a *vinca* alkaloid. It is a mitotic inhibitor and used in cancer chemotherapy. Vincristine is mainly used to treat acute leukemia and other lymphomas. Using Vincristine and vincristine in combination with chemotherapy has resulted 80% remission in Hodgkin's disease, 99% remission in acute lymphatic leukemia 80%, remission in *wilm's* tumor 70%, in gestational chorio-carcinoma and 50% remission in *burkitt's* lymphoma.

Result and conclusion-

Sandapushpa is very ignorable *ayurvedic* herb. But it is very useful drug in the treatment of cancer. It is easily available. It is easily cultivated in home, garden or in large scale farm. It is not *vish* or *upvish*. So it do not require *shodhan*. we can use it directly. It is very *viryan* drug. It is very cheap drugs.

We can take *sandapushpa patra swaras* (juice of leaves) 10-20 ml BD or TDS. With the help of these drugs we can increase life span of cancer patients and make the patient hopeful towards life.

So do not ignore *sandapushpa* and make it a part of life. Other *ayurvedic* herbal drugs like *Bhallataka*,

Gunja, Shirish, Saptaparna, Haridra, Kutaki, Shigru, Aswagandha, Kumari, Allium Sativum and Allium cepa and many nature drugs use in cancer chemotherapy but Sandapushpa play an very important role in the management of cancer chemotherapy.

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