

Ambasta *et al.*, 1992; Chopra *et al.*, 1996; Pal and Jain, 1998; Patil, 2008; Ziaei, 2016; Aremu and Pendota, 2021; Wang and meng, 2021) [5, 6, 7, 8, 9, 10, 13, 14, 15, 16].

Enumeration

The present paper enumerates 40 plant species arranged alphabetically along with their correct botanical name, family in parenthesis, local names in inverted comma, locality and collection number, parts used, mode of preparation and details of ethnomedicinal uses.

Acalypha indica L. (Euphorbiaceae), 'Kaphgajri'

Locality and Collection No.: Ramkhol- 726

Headache: Leaf paste is applied on forehead to cure headache.

Achyranthes asper L. (Amaramthaceae), 'Kukurdanti'

Locality and Collection No.: Nrusinghnath-465

Body pain, Joint pain: Root is sun dried and powdered. It is mixed with warm mustard oil and massaged over the affected part to get relief from body pain and joint pain.

Adina cordifolia (Roxb.) Brandis (Rubiaceae), 'Haland'

Locality & Collection No. Ramkhol- 722

Swelling pain: Leaf or bark paste is applied on the effected part to get relief from swelling pain.

Ailanthus excelsa Roxb. (Meliaceae), 'Mahaleem'

Locality and Collection No.: Ainlapali- 100

Body pain: Bark and curd prepared from buffalo milk are crushed together and applied on the affected part to get relief from body pain.

Antidesma acidum Retz. (Phyllanthaceae), 'Jamardi'

Locality and Collection No.: Ramkhol- 164

Body pain: Leaf paste is applied over the affected part to get relief from body pain.

Aphanamixis polystachya (Wall.) Parker (Meliaceae), 'Paniksum'

Locality and Collection No.: Nrusinghnath- 137

Muscular pain and rheumatic pain: Seed oil is massaged on the affected part of the body regularly to get relief from muscular as well as rheumatic pain.

Ardisia solanacea Roxb. (Primulaceae), 'Kutiaphal'

Locality and Collection No.: Nrusinghnath- 414

Stomach pain: Root decoction (15 ml) is taken 1 to 2 times daily to get relief from stomach pain after delivery.

Byttneria herbacea Roxb. (Malvaceae), 'Samarkhai'

Locality and Collection No.: Khandijharan- 317

Body pain: Leaves are crushed along with the leaves of *Ocimum sanctum* and taken 1-2 times daily in empty stomach to get relief from body pain.

Cadiospermum helicacabum L. (Sapindaceae), 'Ludru'

Locality and Collection No.: Khandijharan- 327

Headache: Leaf extract (2 – 3 drops) is poured in to the nostrils once or twice daily to cure headache.

Menstrual pain: Leaf extract of the plant and fruit powder of *Piper nigrum* in a proportion of 4:1 is taken once or twice daily to cure pain during menstrual cycle (dysmenorrhea).

Calotropis procera Br. (Apocynaceae), 'Arakh'

Locality and Collection No.: Beherapali- 236

Stomach pain: Leaf of the plant is warmed and it is applied over the abdomen to get relief from stomach pain.

Catharanthus roseus (L.) G. Don. (Apocynaceae), 'Baramasi'

Locality and Collection No.: Beherapali- 234

Body pain: Leaves are chewed twice daily in empty stomach to get relief from body pain.

Cleistanthus collinus (Roxb.) Benth. ex Hook. f. (Euphorbiaceae), 'Karla'

Locality and Collection No.: Samardhara - 442

Muscular pain: Warm leaf paste is applied on the affected part to cure muscular pain.

Cyamopsis tetragonoloba (L.) Taub. (Leguminosae), 'Guanr-semi'

Locality & Collection No.: Ainlapali- 302

Body pain: Fruits of the plant are fried in seed oil of *Sesamum indicum* and bandaged on the affected part to get relief from body pain.

Euphorbia neriifolia L. (Euphorbiaceae), 'Thua'

Locality and Collection No.: Barabakhara- 368

Back pain: Freshly cut stem is warmed and fomented over the affected part to cure back pain.

Flemingia stricta Roxb. (Leguminosae), 'Sabalbhanj'

Locality & Collection No.: Ramkhol- 254

Back pain: Root paste is applied on the affected part to get relief from back pain.

Garuga pinnata Roxb. (Burseraceae), 'Keinkat'

Locality & Collection No.: Nrusinghnath- 587

Back pain and Joint pain: Gum paste is applied on the affected part and at the same time gum powder (1 gm) with lukewarm water is taken twice daily in empty stomach to get relief from back pain and joint pain.

Gloriosa superba L. (Colchicaceae), 'Puraphul'

Locality & Collection No.: Nrusinghnath- 469

Body pain: Tuber paste is applied locally to cure body pain.

Hellenia speciosa (J. Koenig) S. R. Dutta (Costaceae), 'Kulihakanda'

Locality and Collection No.: Ramkhol- 732

Joint pain: Tuber of the plant and rhizome of *Curcuma longa* are crushed together to a fine paste and applied over the affected part twice daily to get relief from joint pain.

Holoptelea integrifolia (Roxb.) Planch. (Ulmaceae), 'Dharanj'

Locality & Collection No.: Kuthikhhol- 512

Back pain and joint pain: Leaf or bark paste is warmed slightly and applied on the affected part to get relief from back pain as well as joint pain.

Hygrophila auriculata (Schumach.) Heine (Acanthaceae), 'Kuilekha'

Locality and Collection No.: Ramkhol- 534

Back pain: Warm seed paste is applied on the affected part to cure back pain.

Ipomoea pes-tigridis L. (Convolvulaceae), 'Bilei-khuji'

Locality and Collection No.: Ainlapali- 745

Swelling pain: Root is crushed to paste and applied on the affected part to get relief from swelling pain.

Kalanchoe pinnata (Lam.) Pers. (Crassulaceae), 'Patargaja'

Locality & Collection No.: Nrusinghnath- 491

Headache: Fresh leaf extract mixed with a pinch of dry rhizome powder of *Zingiber officinale* is applied on the forehead twice daily to cure headache.

Kydia calycina Roxb. (Malvaceae), 'Phula-baranga'

Locality and Collection No.: Nrusinghnath- 468

Muscular pain: Stem bark paste is applied over the affected part to get relief from muscular pain.

Madhuca longifolia (J. Konig) J. F. Macbr. (Sapotaceae), 'Mahul'

Locality & Collection No.: Uttam- 179

Muscular pain and joint pain: Seed oil is massaged over the affected part to get relief from muscular pain and joint pain.

Marsdenia tenacissima (Roxb.) Moon. (Apocynaceae), 'Candur'

Locality & Collection No.: Kuthikhoh-581

Post-natal pain: Root of the plant crushed with polished rice washed water and the paste (1-2 teaspoon) is taken twice daily to cure post-natal pain.

Martynia annua L. (Martyniaceae), 'Baghnakhi'

Locality and Collection No.: Kharmunda- 221

Muscular swelling pain: Leaves are crushed to paste and mixed with seed oil of *Sesamum indicum* and applied locally to get relief from muscular swelling pain.

Morinda coreia Buch.-Ham. (Rubiaceae), 'Anchhi'

Locality & Collection No.: Behera-224

Swelling pain: Leaf paste is warmed slightly and applied on the affected part to get relief from swelling pain.

Moringa oliefera L. (Moringaceae), 'Munga'

Locality and Collection No.: Ramkhol- 256

Swelling pain: Stem bark crushed with cow's urine and warmed. It is applied and bandaged with a warm cloth on the affected part to cure swelling pain.

Nelsonia canescens (Lam.) Spreng (Acanthaceae), 'Rasna'

Locality and Collection No. : Nrusinghnath-481

Body pain: Root decoction (one cup) is taken 1-2 times daily to cure body pain.

Paederia foetida L. (Rubiaceae), 'Gandhel'

Locality and Collection No.: Nrusinghnath-334

Back pain: Leaf paste (5-10g) is taken 1-2 times daily in empty stomach to cure back pain after delivery.

Ricinus communis L. (Euphorbiaceae), 'Jada'

Locality and Collection No.: Beherapali-231

Back pain: Root (5g) is crushed with rice washed water and taken once daily to cure back pain of a nursing woman.

Semecarpus anacardium L.f. (Anacardiaceae), 'Bheluan'

Locality and Collection No.: Khandijharan- 652

Back pain and rheumatic pain: Dried fruits of the plant are crushed and boiled with rice. The rice is taken to get relief from back pain and rheumatic pain.

Smilax zeylanica L. (Smilacaceae), 'Muter'

Locality and Collection No.: Ramkhol- 381

Back pain: Root powder of the plant, rhizome powder of *Zingiber officinale* and fruit powder of *Piper nigrum* are mixed together in a proportion of 1: ½: ½. The powder (1 teaspoon) is taken once daily in the evening for 7 to 15 days to cure back pain during menstrual period.

Stephanotis volubilis (L.f.) S. Reuss, Liede & Meve (Apocynaceae), 'Mendhamund'

Locality and Collection No.: Khandijharan- 643

Joint pain and headache: Leaves of the plant and rice washed water are crushed together and applied to cure joint pain. Fresh root paste is applied on the forehead to cure headache of nursing mother.

Symplocos racemosa Roxb. (Symplococaceae), 'Lodha'

Locality and Collection No.: Nrusinghnath- 478

Postnatal pain: Bark of the plant and fruit pulp of *Lagenaria siceraria* are crushed together and warmed. It is wrapped on a cloth and applied over female sex organ to get relief from pain after delivery.

Terminalia elliptica Willd. (Combretaceae), 'Sahaj'

Locality and Collection No.: Khandijharan- 313

Back pain: Equal amount of bark of the plant, bark of *Aegle marmelos* are crushed together and boiled in water and the warm decoction is fomented over the affected part to cure back pain.

Vitex negundo L. (Verbenaceae), 'Nirguni'

Locality and Collection No.: Ramkhol- 369

Rheumatic pain: Leaves of the plant with a pinch of rhizome powder of *Curcuma longa* are crushed to fine paste and applied over the affected part and bandaged with a cloth to get relief from rheumatic pain.

Zanthoxylum armatum DC. (Rutaceae), 'Ranbel'

Locality and Collection No.: Nrusinghnath- 413

Toothache: Stem bark crushed to fine paste is applied to get relief from toothache.

Zingiber officinale Rosc. (Zingiberaceae), 'Ada'

Locality and Collection No.: Barhaguda- 290

Back pain: Dry rhizome paste mixed with *Ricinus communis* seed oil is applied on the affected part to cure back pain.

Ziziphus rugosa Lam. (Rhamnaceae), 'Hadkankali'

Locality and Collection No.: Manbhang- 461

Muscular Pain: Bark paste is applied on the affected part to get relief from muscular pain.

Results and Discussion

The results revealed that local traditional knowledge plays a vital role in primary healthcare as the practice of plant-based medicine is still prevalent in rural areas of the Bargarh district. The present paper highlights on the traditional use of 40 ethnomedicinal plant species belonging to 30 families with a total of 50 prescriptions.

The present study explains 40 plant species are used to cure different types of pain in the body. It has been observed that the number species used are tree (17) followed by herbs (11 species), climbers (6 species) and shrubs (5 species) with tree as maximum number (fig. 2).

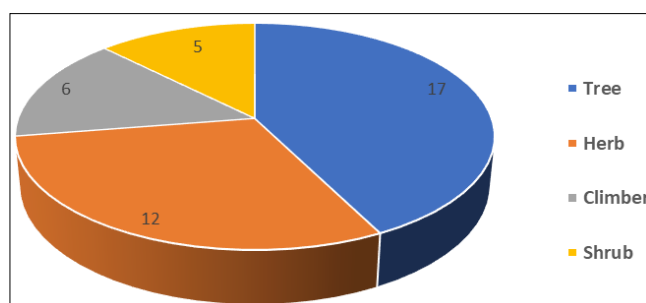


Fig 2: List of different categories of plants

The paper highlights 50 prescriptions, out of which 38 prescriptions are used externally 2 of them used internally and 10 prescriptions are used orally (fig. 3).

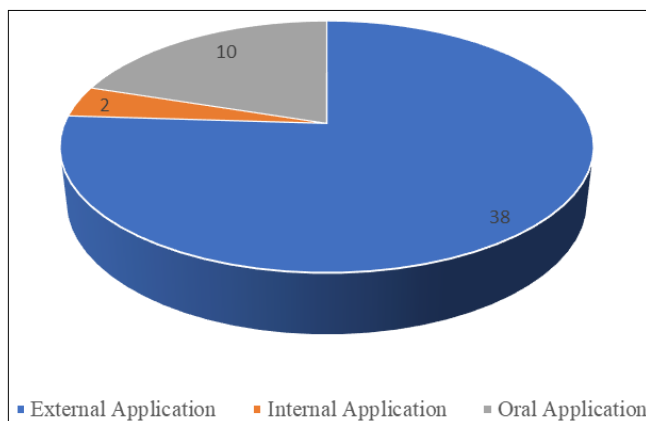


Fig 3: Types of Medicinal Application

The plant parts used in maximum number are leaves (16) followed by root and stem bark (10 each), seed (5), fruit (3) tuber and gum (2 each) and whole stem and rhizome (1 each) (fig. 4).

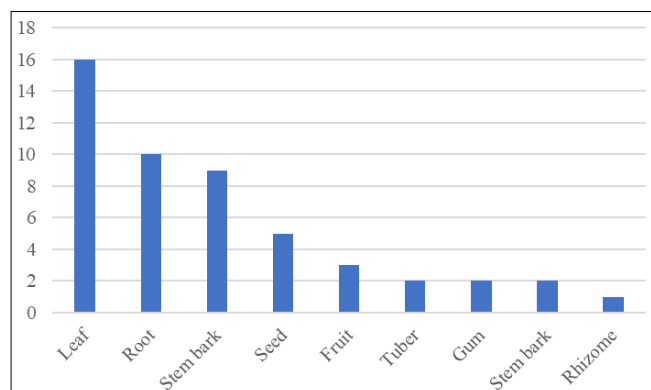


Fig 4: Mode of application of plant parts

Besides, the plant parts are used in the form of paste (29 times), followed by powder (7 times), decoction and oil (4 times each), extract and whole plant parts (3 times each) (fig. 5)). From the above study it has been observed that out of 50 prescriptions, the plant parts are used singly in 30 cases and in 20 cases it has been mixed with other ingredients.

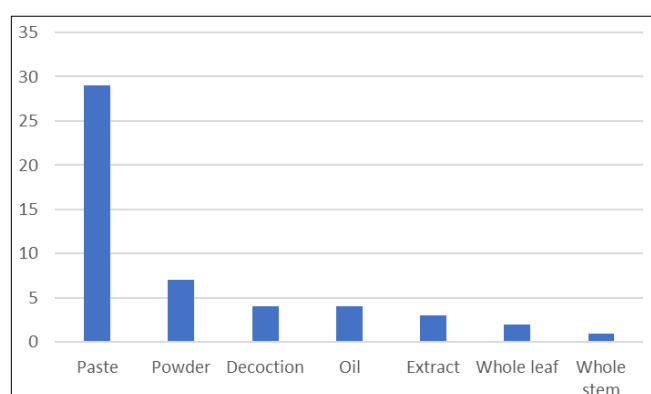


Fig 5: Mode of application of plant parts in different forms

Conclusion

Plants are important sources of drugs and play a significant role in the healthcare of human beings. India's herbal medicine practice can be traced back to the ancient texts of Ayurveda, which is considered the oldest known medical system in the world. It has been observed during the survey that the use of medicinal plants is wide spread among the tribals and other rural communities including herbal medicine practitioners, experienced old men and women, which is missing in young generation. Knowledge of properties and uses of medicinal plants is generally acquired through long experience accumulated and passed on from one generation to the next, as a result of which the transmission of this knowledge is in danger today.

In the present study it is recorded that ethnomedicinal plants are used to cure various pains (headache, body pain, back pain, joint pain, swelling pain, muscular pain, rheumatic pain, stomach pain, postnatal pain, dysmenorrhea, and toothache) in human body. The plant parts used are root, leaf, stem, stem bark, seed, fruit and gum. These parts are used in the form of paste, powder, decoction, oil and whole plant part.

It appears that exploitation of some wild plants for medicine is unsustainable and might threat of their existence. Hence, there is need to protect and conserve these plant species and also a detailed investigations of ethnomedicinal knowledge held by these local villagers should be preserved before such valuable knowledge is lost forever.

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