

Putranjiva roxburghii Wall: The controversies and the concurrences

Janmejaya Samal¹, Ranjit Kumar Dehury²

¹Independent Public Health Consultant, Bhubaneswar, Odisha, India, ²Department of Healthcare Management, Goa Institute of Management, Panaji, Goa, India

Abstract

Putranjiva roxburghii Wall, otherwise known as *Drypetes roxburghii* (Wall), belongs to the *Euphorbiaceae* family. The plant is widely grown in Thailand, Nepal, Bangladesh, India, Indochina, Myanmar, and Sri Lanka. In traditional medicine and Ayurveda, its leaves and fruits are being used for the treatment of fever, muscle twisting, arthralgia, and rheumatism. Its usage in other clinical conditions such as azoospermia, catarrh, and constipation have also been documented. Recently, the plant came into limelight after the opposition leaders in Indian parliament claimed that an Ayurvedic medicine named Putrajeevak Beej is being marketed promising a male child. The main component of Putrajeevak Beej is *P. roxburghii* Wall. The controversy reached to heights when gender equality was attached with it. Latter, the manufacturer, came forward and clarified that the drug is meant for the treatment of infertility and has nothing to do with sex selection.

Key words: Ayurveda, child life tree, female feticide, gender equality, infertility treatment, Putrajeevak Beej

INTRODUCTION

Putranjiva roxburghii Wall is a medicinal plant found throughout India. It belongs to *Euphorbiaceae* family and is an ornamental tree of tropical India known as child life tree. This plant has been in use for the treatment of several health problems.^[1] The drug was under controversy, for some time in India, as a part of an Ayurvedic preparation named Putrajeevak Beej manufactured by the Patanjali Ayurveda Kendra, part of a trust established by Yoga guru Baba Ramdev.^[2] Following two pictures give a description about the plant; Figure 1, *P. roxburghii* Wall with fruits and Figure 2, *P. roxburghii* Wall with flowers.

trust established by Yoga guru Baba Ramdev. The opposition leaders termed it as illegal and unconstitutional and demanded stringent action against the manufacturer.^[2] This is obviously a problem of local nomenclature and the meaning derived out of it. There are many controversies surrounding the homo names and synonyms. This happens in general society and also within scientific community. However, the real essence could only be arrived at after thorough inquiry and testing the scientificity. Sometimes, this also happens with the medical prescriptions due to the illegible writing practices of doctors. The chemist may take it differently and advice a wrong medicine. These are some of the critical situations arise due to a misunderstanding of situations and meaning of the destined actions.

THE ROOT CAUSE OF THE CONTROVERSY

In India, the declining sex ratio is a matter of great concern. India is already facing several repercussions to the declining sex ratio. In a normal scenario, elsewhere in the world, the

THE CONTROVERSY

A recent controversy on a medicinal plant named *P. roxburghii* was a topic of discussion in most of the news dailies in India throughout the year 2015. The news started flashing in every newspaper after the opposition leaders in Indian parliament claimed that an Ayurvedic medicine named Putrajeevak Beej is being marketed promising a male child. It was primarily due to the literal meaning of this drug; “the seed that gives life to a son.” This drug is being manufactured by the Patanjali Ayurveda Kendra, part of a

Address for correspondence:

Dr. Janmejaya Samal, C/O Mr. Bijaya Ketan Samal, At-Pansapalli, Po-Bangarada, Via-Gangapur, Ganjam - 761 123, Odisha, India.
E-mail: janmejaya_samal@yahoo.com

Received: 04-04-2016

Revised: 19-05-2016

Accepted: 26-05-2016



Figure 1: *Putranjiva roxburghii* Wall with fruits



Figure 2: *Putranjiva roxburghii* Wall with flowers

population of female is normal or little higher than that of the male population however the situation in India is opposite. It was in China where the proportion of girls to the boys is less; however, the 2001 census revealed dismal results where the proportion of girls aged 0-6 years dropped from 945:1000 to 927:1000 since the previous census done 10 years earlier. This indicates 35 million fewer females registered to males during the decade. The more disturbing fact from this census is that the phenomenon has reached high proportion in states where similar problem was not observed during earlier censuses. Reports reveal that the child sex ratio (boys per girls) is within the normal natural range (105-107) in all eastern and southern states of India; however the same is significantly higher in certain western and especially northwestern states such as Panjab (118), Haryana (120), and Jammu and Kashmir (116) as of 2011 census.^[3]

With such a poor situation in relation to sex ratio in India, if a drug promises a male child that would definitely lead to a controversy. The issue became a gender-related issue and got more attention owing to the current central Government's initiative to save girl child. Recently, the Ministry of women and child development introduced a scheme, *Beti Bachao*,

Beti Padhao Yojana (Save girl child, educate girl child scheme) in January 22, 2015. The main objective of this scheme is to prevent gender biased sex selective elimination, ensure survival, and protection of girl child and ensuring education and participation of the girl child.^[4]

The feminist movements have also justified arguments for the bias against girl child. In India, especially the northern states have a much-skewed sex ratio which warrants immediate action. The social imbalance due to skewed sex ratio is palpable with respect to social pathology – lack of bride, violence against women, and family problems. This shows the aggressiveness for bringing a balanced life with gender equity. The government and the non-governmental agencies are working relentlessly in India for the gender equity. At this juncture, anything against the female gender is not tolerable in the society. It will warrant strict action without verifying the scientificity or rectification of minor understandings of the issue. Many a time, the matters pertinent to gender are also wrongly represented by various media and pressure groups. There are also certain groups those take undue advantages from the trifling issues in India given the fact that the Indian society is very sensitive to the issues linked with its culture, religion, and belief system.

The gender imbalance in Indian society has shown its ugly face for the past two decades with crises. Hypothetically, many bachelors do not have brides due to indiscriminate female feticides by the popular use of sex determining ultrasonography machines after the 1980s. In a patriarchal society, it is very difficult to establish gender sensitivity without doing a root cause analysis of any intervention. The sex-selective abortion is very deeply entrenched in India society with multiple social pathology. There is a concern and intent for the elimination of such problem in the part of the Indian government. However, all the stakeholders are not taken into confidence to find out solutions. The laws to protect the rights of women are not practiced in good letter and spirit. This warrants a multipronged approach for solving the problem than mere superficial interventions.

THE CONCURRENCES

After such controversies, the manufacturer came forward and clarified about the drug. The manufacturer reported that the drug is prepared as per the classical delineations of Ayurveda. It is named after the principal constituent of the preparation; *P. roxburghii*. It is called “Putrajivak” in several Indian languages; Hindi, Gujarati, Kannada, Marathi, Telugu, and Bengali. The manufacturers have also clarified that the drug is meant for the treatment of infertility and has nothing to do with sex determination.^[2] This fact is confirmed from other sources as well as the drug is being traditionally used for azoospermia, catarrh, and constipation.^[5]

The repercussion is huge when there is controversy relating to any drug. Here, the controversy is related to social ethos and values. This creates repeal in the fragile society like India where multi-religious people live and have different perceptions about the girl child. Some of the extreme groups take it as an issue to show their dissent. Some groups also take undue advantages on this particular issue by protesting beyond the requirements for political gain.

If at all there is some serious issue with a particular brand or a drug, a competent authority is there to investigate, drug controller of India, or any authorized laboratory by the government of India. Without following the scientific procedure, there are huge hue and cry across the country based on partisan line happened in India. The concerned ministry addressed the matter considering the public sentiments and concerns. These consequences not only just harm the scientific temper of the issue but also vitiate the society.

THE DRUG AND ITS OTHER THERAPEUTIC PROPERTIES

In traditional folklore medicine, leaves and fruits of *P. roxburghii* have been used for the treatment of fever, muscle twisting, arthralgia, and rheumatism.^[6] It is also used as antinociceptive, antipyretic, and anti-inflammatory.^[7] Furthermore, the whole plant of *P. roxburghii* has been used for the treatment of fever and hemorrhoids.^[8]

Various phases of clinical trial show different beneficial results of a particular drug. A drug is also subject to verification after a few years of marketing based on the result that could be used for other beneficial purposes. A drug should not simply be avoided based on the perception of few adverse effects rather the curable potentials of the drug be assessed and used for all the beneficial effects. In case of *P. roxburghii* as well, it requires systematic therapeutics evaluations for its clinical efficacy against its indicated diseases. This requires the involvement of various stakeholders such as physicians, patients, volunteers, government, and researchers. Sound research infrastructure is needed to ascertain the inherent values of an herbal drug as adopted in the case of modern medicines. As it is a public good, the government is supposed to help and mobilize resources.

CONCLUSION

The discussion among the scientific community is required more than the half-literate partisans to ascertain the quality

of any drug. Controversy if any in the society needs to be addressed by the laboratory and government for the continuation of particular drugs. The age old practice and therapeutics value of a drug need to be highlighted in the scientific community by media like print media, electronics media, scientific literature, and professional associations. There is a further requirement of social interventions to prevent people from not being misguided by the careless statements of partisan groups.

Concerns shown by some of the Indian parliamentarians regarding the declining female sex ratio is a matter of pride, however, linking this to an issue without proper exercise and investigation seems absurd. There are several pending bills that need to be passed for the benefit of the Indian mass. Hence, this seems a petty politics and easy way of drawing attention by some of the parliamentarians which they should contemplate.

REFERENCES

1. Chaudhary NS, Shee C, Islam A, Ahmad F, Yernool D, Kumar P, *et al.* Purification and characterization of a trypsin inhibitor from *Putranjiva roxburghii* seeds. *Phytochemistry* 2008;69:2120-6.
2. The Times of India. Ruckus in RS over Ramdev's drug promising male child. TNN|May 1, 2015.
3. Census of India 2011. Child sex ratio drops to lowest since Independence. The Economic Times, India. PTI March 31, 2011.
4. Government of India, Ministry of Women and Child Development. Beti Bachao Beti Padhao. Available from: <http://www.wcd.nic.in/BBBPScheme/main.htm>. [Last accessed on 2016 Feb 10].
5. Sahni KC. The Book of Indian Tree. 2nd ed. New Delhi: Himalaya Publishing House; 2009. p. 285-9.
6. Boonyaprapat N, Chokechaicharoenporn A. Samunprai Maipuenban. Vol. 3. Bangkok: Prachachon; 1999. p. 262-73.
7. Wantana R, Tassanee N, Sanan S. Antipyretic, anti-inflammatory and analgesic activity of *Putranjiva roxburghii* leaves. *Net Med (Tokyo)* 2009;63:290-6.
8. Shahwar D, Raza MA, Saeed A, Riasat M, Chattha FI, Javaid M, *et al.* Antioxidant potential of the extracts of *Putranjiva roxburghii*, *Conyza bonariensis*, *Woodfordia fruticosa* and *Senecio chrysanthemoids*. *Afr J Biotechnol* 2014;11:4288-95.

Source of Support: Nil. **Conflict of Interest:** None declared.