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## Diversity in the Use of Ethno Medicines by the Medicine Men/Women of the Districts Purulia and Bankura, W.B., India, for Abortifacient Purpose

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### Abstract

The districts Purulia and Bankura are inhabited by a good number of aboriginals. Amongst them Santal tribal people are quite preponderant. The Santal Medicine men or women are very expert in treating the people with the medicines prepared from the plant part and other ingredients (common called talans) available in the hilly regions of these districts. They have a good knowledge for preparing the medicines for abortive purposes also

A thorough search was conducted to investigate the plant based medicines used by the medicine men/women within the Santal tribal people of the districts Purulia and Bankura, West Bengal, INDIA.

The results of this investigation clearly point out that very few medicine men are involved in this type of treatment in the same topographical region. Although limited number of medicine men are efficient in abortifacient activity but the results show some diversification in the pattern of using the plant parts.

**Keywords:** Aborigines, Abortifacient, Topographical, Diversification, Talans.

### Introduction

Tribal people throughout the world have an indigenous traditional knowledge of their own. They use various types of medicines (ethno medicines) for curing from different types of diseases. The tribal people of West Bengal also use plants and plant derived materials for the process of contraception. Since the tribal people live in the forest covered hilly areas, so they have their own expertise too. Several books have been published regarding tribal medicines representing almost all the regions of India (on N.W. Himalayas<sup>[1]</sup>), to South (on Andhra<sup>[2]</sup>), from West (on Rajasthan<sup>[3]</sup>) to east<sup>[4]</sup> and on many parts of northern<sup>[5]</sup>, Central<sup>[6]</sup> and Peninsular India<sup>[7]</sup>. Some of the districts of West Bengal are enriched with a good number of tribal communities. Amongst them the Districts Bankura, Paschim Medinipur and Purulia are quite noteworthy. Although the tribal people are also present in some other districts but their number are very limited. Amongst the various tribal people, the Santals are quite predominant in the districts Purulia and Bankura. Indigenous people still believe that misfortune, sudden coming health problems are mostly due to some evil spirits or by breaking the laws of religious taboos. Ojhas, Mukhia, Medicine men / women and Traditional healers in different villages of these two districts have a good knowledge about ethno medicines. The medicine men/women of these two districts also use different plant parts for contraceptive and abortive purposes. Although they live within the same geographical niche but their traditional systems are little bit different and their mode of preparation and application of medicines on the common people are also different. Regarding the abortifacient purpose limited number of medicine men of both the districts are engaged to apply the medicine on the common people. However, there is some diversity. To point out the diversification amongst the types of medicines used for abortifacient purpose, the present studies have been conducted in the districts Purulia and Bankura in a comparative way.

### Methodology

For the major folk utilization of plants, plant parts alone or combination with other ingredients by the medicine men / women of Santal Tribal people of the districts Purulia and Bankura, several extensive field surveys were carried out in various hilly regions and surrounding areas of these two districts. With the help of local people (interpreter), the medicine men of the tribal community were asked various questions regarding their way of treatment and types of

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medicines used for curing various types of diseases. Most of the medicine men/women did not want to disclose their knowledge because they have their belief that the medicine will lose their power if too many people know their techniques. However, the authors have collected the information with the co-operation of the medicine men/women of the Santal Tribal community and local people of these two neighboring districts of West Bengal.

**Geographic Aspects of the District Purulia.**

**Location:**

Purulia is the westernmost district of the state of West Bengal. The district is griddled by the Tropic of Cancer. Its latitude extends from 22° 42' 35" N to 23° 42' 0" N and its longitude extends from 85° 49' 25" E to 86° 54' 37" E.

**Area:**

The total area of the Purulia District is 6259 KMs.

**Topography:**

The highlands of Purulia are actually the remnants of the spurs projecting from the Ranchi Plateau to the west and functioning as watersheds of the Subarnarekha – Kasai-Damodar groups of rivers.

The main hills of the Purulia District are:

1. Bagmundi – Ajodhya Hill
2. Panchet Hill
3. Jaichandi Hill
4. Jabar Hill
5. Tilabani Hill

**Weather & Climate of the District Purulia**

The Tropic of Cancer passes through the district. As a result

the climate of this district is very hot.

**Geographic Aspects of the District Bankura**

**Location:**

Bankura District is commonly termed as the Rarh Bengal. This district is located in the western part of the state of West Bengal.

The District Bankura is bounded by the latitude 22° 38' N and the longitude 86° 36' E to 87° 47' E.

**Area**

Bankura is the fourth largest district of the state of West Bengal. It has an area of 6882 sq.km.

**Topography:**

The main topographical features of this district are the presence of some hills, they are:

1. Biharinath hill
2. Susunia hill
3. Koro hill
4. Masak hill
5. Lady hill

**Weather and climate of the district Bankura**

The tropic of cancer passes almost through the middle of the district. The climate of the district Bankura is generally healthy. The air is dry and fogs are rare in occurrence.

**Results:**

Medicines for abortive purposes are very limited used by the medicine men of the districts Purulia and Bankura. The major findings have been plotted in the tabular form (Table No.1). Some relevant photographs of the plants used for abortive purposes are shown in the Figs. (Figs. 1, 2, 3, 4, 5, 6.)



**Fig: 1**  
*Mucuna pruriens* (L)  
(Alkushi)



**Fig: 2**  
*Sida rhombifolia* L.  
(Bagjati)



**Fig: 3**  
*Desmodium gangeticum* (L)  
(Titakhari)

**Fig 1-3: Abortifacient Plants of Purulia District**



**Fig: 4**  
*Achyranthes aspera* L.  
(Apang)



**Fig: 5**  
*Calotropis gigantea* L.  
(Sweet Akanda)



**Fig: 6**  
*Acacia nilotica* (Linn)  
(Babul)

**Fig 4-6: Abortifacient Plants of Bankura District**

**Table 1:** A comparative chart in the use of ethno medicine for causing abortion by the Santal Medicine men/women of the Districts Purulia and Bankura

Purulia			Bankura		
Sl. No.	Plant name	Purpose	Sl. No.	Plant name	Purpose
1.	i) Mahua ( <i>Madhuca indica</i> J.M. Gmel) liquor and ii) Hing ( <i>Ferula assafoetida</i> L)	Mixture of these two leads to abortion up to 3 months of pregnancy.	1.	i) Arhar ( <i>Cajanus cajan</i> L.Mill sp.) ii) Iswarmul ( <i>Aristolochia indica</i> L.)	Skin of arhar and roots of Iswarmul grinded together to form pill. Intake of pill for 3 consecutive days lead to abortion up to 3 months of pregnancy.
2.	i) Fresh root tips of Chitway ( <i>Plumbago zeylanica</i> L.) and ii) Hing ( <i>Ferula assafoetida</i> L).	Root tips along with hing insert within vagina. It causes abortion up to 2-3 months of pregnancy.	2.	i) Pepe ( <i>Carica papaya</i> Linn.) ii) Sarnalata ( <i>Cuscuta reflexa</i> Roxb.) iii) Chirchiti ( <i>Achyranthes aspera</i> L.)	Latex of green pepe and swarnalata are mixed together forming paste. Fresh root tip of chirchiti with the mixture were inserted into the vagina for few hours. It lead to abortion up to 5 months of pregnancy and expulsion of dead fetus also.
3.	i) Bagjati ( <i>Sida rhombifolia</i> L) root ii) <i>Piper nigrum</i> powder	Insertion of smashed root tips of Bagjati with <i>Piper nigrum</i> powder within vagina lead to abortion up to 2-3 months of pregnancy.	3.	i) Ashoka ( <i>Saraca asoca</i> ) ii) Kachnar ( <i>Bauhinia variegata</i> ) iii) Rahini ( <i>Soymita febrifuga</i> A.)	Dried bark of these three plants are mixed together. One spoon powder with a glass of water twice a day for 2-5 days. It causes spontaneous abortion.
4.	a. Mirubaha ( <i>Abutilonindicum</i> L.) b. Alkushi ( <i>Mucuna pruriens</i> (L.) DC)	Smashed roots are mixed with talans forming pill. Intake of single pill – two times a day lead to abortion of 3-4 months of pregnancy.	4.	i) Chita ( <i>Plumbago zeylanica</i> Linn.) ii) Iswari ( <i>Aristolochia indica</i> Linn.)	Root paste of Chita and Iswari are mixed with opium, labang and catechu and taken orally – It causes abortion up to 2-3 months of pregnancy.
5.	Chatpati ( <i>Desmodium triflorum</i> (L.) DC.	Only the fresh roots are inserted within vagina. It will lead to abortion of 2-3 months of pregnancy.	5.	i) Pepe ( <i>Carica papaya</i> Linn.) ii) Til ( <i>Sesamum indicum</i> Linn.)	Latex of Pepe and Til are mixed together with some talans (e.g., golmarich and labang) -- taken orally for three consecutive days. It will lead to abortion up to 2-3 months of pregnancy.
	Chotojhunjuni ( <i>Crotalaria prostrata</i> Rott.ex Willd )	Fresh root tips with the dust of Kankrasingi induces abortion up to 1-1.5 months of pregnancy.	6.	i) Tulsi ( <i>Ocimum sanctum</i> Linn.) ii) Jiti ( <i>Caisalpinia pulcherrima</i> Linn.)	Fresh roots of tulsi and jiti are mixed together with talans (e.g., golmarich and Jaephol) forming a decoction – will be taken orally. It will lead to abortion up to 2-3 months of pregnancy.
7.	Fresh root tips of Titakhari ( <i>Desmodium gangeticum</i> (L.) DC)	Fresh root tips within the vagina leads to abortion up to 2-3 months of pregnancy and expulsion of dead fetus.	7.	i) Babul ( <i>Acacia nilotica</i> Linn.)	Gum of babul plant is mixed with hing and inserted into the vagina for three days. It will lead to abortion up to 2 months of pregnancy.
8.	i) Chirchiti – <i>Achyranthes aspera</i> L. ii) Akona- <i>Calotropis gigantean</i> (L.) R.Br.	Fresh root tips of chirchiti coated with latex of akona are inserted within vagina. It will lead to abortion up to 3-4 months of pregnancy.	8.	i) Sibjata ( <i>Rungia pectinate</i> Linn.) ii) Kalmegh ( <i>Andrographis paniculata</i> Burn.f.)	Roots of Sibjata and leaves of Kalmegh are mixed with some talans ( e.g., kalojira, mouri and crystallized sugar ) forming pills. 3 pills will be taken for seven consecutive days. It will lead to abortion up to 2 months of pregnancy.
9.	Chirchiti ( <i>Achyranthes aspera</i> L.)	Fresh root along with hing dust are inserted within vagina for 8-10 hours. it will lead to abortion up to 2-3 months of pregnancy	-----	-----	-----
10.	Saoraj ( <i>Centratherum antheminticum</i> (L.) O.Kuntze	The seeds of Saoraj and hing (talan) are mixed to form pill. One pill for 7 consecutive days. It will lead to abortion up to 3 months of pregnancy.	-----	-----	-----

### Discussion

In the present study various types of plant parts and other substances (commonly known as talans) used by the Santal

medicine men/women of the districts Purulia and Bankura. All the medicines mentioned here were mainly used by separate medicine men of the two neighboring districts. A close

scrutiny of the data clearly indicates that excepting one or two plants most of the plant parts and other ingredients show some variation. But the purpose of use of these plant medicines is very clear i.e., for abortifacient purpose. It is also quite clear that very limited number of medicine men/women are engaged for the preparation of medicines for abortifacient purposes and their prescriptions also differ from one another. Excepting one or two most of the differences are very acute.

The Santals are predominant tribe within the districts Purulia and Bankura. It has been noticed that medicine women are specialized mainly for female diseases. It is also noticed that most of the healers of the Santal tribal community are male, female medicine men are limited in number. They also work as a nurse during childbirth and use some plant medicines as abortive purposes.

The medicine men/women of the districts Purulia and Bankura usually use the stem bark or fresh roots for abortifacient purposes. As for example the tribal medicine men used *Achyranthes aspera* L. on many occasions as the male or female contraceptive and also as the abortive purposes. Betanin, achyranthine, saponin A and B, ecdysterone, oleanolic acid have been isolated from this plant. The stem bark of this plant has abortifacient property<sup>[8]</sup>, whereas the roots have contraceptive property<sup>[9]</sup>. In the present study Chirchiti (*Achyranthes aspera* L.) roots have been used by the medicinemen of both the districts. Some of them used the root either with hing or latex of akona or latex of green papaya and swarnalata. How it acts on the uterine wall is not yet described. Several herbs are mentioned in different literature, which, have abortifacient effect<sup>[10, 11, 12, 13, 14, 15, 16]</sup>. Anti-implantation and anti-estrogenic activity of sesquiterpene from the roots of *Aristolochia indica* Linn. was observed in female mice<sup>[17]</sup> and in female Wister rats<sup>[18]</sup>. *Abroma augusta* also showed abortifacient activity<sup>[19]</sup>. *Plumbago zeylamica* L. is another type of plant, which is used for both female contraceptive and abortifacient purposes by the medicine men. Plumbagin is the main constituent of this plant. This plant has significant anti implantation and abortifacient activity<sup>[20]</sup>. From the results of the present comparative study, it is quite evident that the limited number of medicine men/women of these two districts use the medicines for abortifacient purpose. The probable reason for the effect of the medicine was that each plant affected a slightly different way on the female periodic cycle. Regarding their action, the medicine men do not know the actual cause but they are quite confident about their medicines. One important thing has been observed that the medicines used by the people of these two neighboring districts are somewhat different. No clear correlation can be made with other medicines used by the medicine men of other communities of the same area. Excepting one or two plants (e.g., chirchiti, *Achyranthes aspera* L.), most of the plants are different and there is no proper documentation also. Whatever may be the action of medicines (either using pills or fresh root tips) the main function is meant for the abortifacient purpose. It is assumed that there is a direct action of the medicines on the uterine wall. Whether there is an influence of any hormone on the uterine wall due to the action of these medicines is not known at present. It needs further thorough investigation and experimentation.

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