



## Herbal abortifacients used by folk people of some districts of western Uttar Pradesh (India)

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### **Abstract**

**Objective:** Present study was intended to document the use of plant based preparations as abortifacient by folk people of five districts of Uttar Pradesh. **Materials and Methods:** Data were collected by interviewing local traditional medicinemen of different villages. **Results and Conclusion:** A total of twenty-six claims were obtained. It appears that the knowledge of abortifacient properties of plants is fairly common in the study area but the extent of their actual use is difficult to assess because of social and legal complications involved.

**Key Words:** Abortion, abortifacient, herbal-medicine, western Uttar Pradesh, ethnomedicine, medicobotany.

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### **1. Introduction**

Uttar Pradesh is the abode of a number of ethnic groups and diverse cultures. Descendents of nearly all ethnic groups have preserved a considerable part of their traditional knowledge through word of mouth. This is the reason why a large volume of ethnobotanical knowledge has been documented from this state [1, 2, 3, 4, 5, 6, 7, 8]. However, review of literature revealed that Aligarh, Budaun, Bulandshahar, Farrukhabad and Hathras districts are still underexplored or unexplored as evident by the scanty literature available for these districts [9, 10, 11, 12, 13, 14, 15, 16]. Therefore, these districts were selected for extensive

ethnobotanical exploration. Folk claims pertaining to use of plants as abortifacient in these districts are reported here.

### **2. Study Area**

This study was conducted in five districts of Western Uttar Pradesh *viz.* Aligarh (27° 34' and 28° 11' N and 77° 29' and 78° 38' E); Bulandshahar (28° 4' and 28° 0' N and 77° 0' and 78° 0' E) ; Budaun (27° 40' and 28° 29' N and 78° 16' and 79° 37' E) ; Farrukhabad (26° 45' and 27° 42' N and 79° 10' and 80° 6' E) and Hathras (27° 35' N and 78° 3' E). All districts have considerable population of scheduled castes

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(9.24 %–26%). Literacy rate among the rural people is fairly low (32%–45%) [17].

### 3. Materials and Methods

Regular visits were made to rural areas of each district during the period 1998- 2000. Reputed traditional healers, locally known as “Vaidyas” (males) or “Daiyas” (females) were requested to provide the information on use and recipe along with one fresh specimen of the plant concerned. Plant specimens were identified with the help of pertinent floras and nomenclature was updated according to recent works on floristics and name change [18, 19].

Only those claims, provided by highly reputed traditional healers were recorded. Each entry contains botanical name, family and local name of the plant, voucher specimen number, recipe, mode of administration and place / places wherefrom the claim was obtained (1= Aligarh, 2= Budaun, 3= Bulandshahar, 4= Farrukhabad and 5= Hathras) in the same order. All voucher specimens were deposited in the herbarium of Department of Botany Aligarh Muslim University, Aligarh.

### 4. Observations

*Abrus precatorius* L. (Fabaceae) *Ghumchi* eb 8: A thin paste obtained by grinding seeds with water is applied as poultice on external genitalia. [1, 3, 4].

*Achyranthes aspera* L. (Amaranthaceae) *Chirchita, Onga, Latjeera* eb 9 :

(a) 25 g of paste obtained by grinding fresh inflorescence is given orally twice a day for 3 days. (b) 50 ml of root decoction is given orally once a day for two days. (c) Root paste is applied externally on pudenda. [1, 2, 3, 4, 5]

*Aloe barbadensis* Mill. (Liliaceae) *Alwi, Gheekawar* eb 112 :

100 g leaf pulp is given orally once a day for seven days. [1, 3, 5].

*Amaranthus spinosus* L. (Amaranthaceae) *Katili chaulai* eb 14:

50 ml decoction of whole plant is given orally thrice a day for 5-7 days. [1, 3, 4].

*Annona squamosa* L. (Annonaceae) *Sharifa* eb 28:

10 g seed powder is given orally thrice a day for three days. [1,4].

*Anethum graveolens* L. (Apiaceae) *Sowa* eb 54: 10-15 g root paste is given orally twice a day for five days. [3]

*Boerhavia diffusa* L. (Nyctaginaceae) *Punarnava* eb 32:

50 g root paste is given orally twice a day for seven days. [1, 4]

*Carica papaya* L. (Caricaceae) *Papita* eb 111: 25 ml latex of raw fruit is given orally once a day for three days. [1, 2, 3, 4, 5]

*Calotropis procera* (Ait.) R.Br. (Asclepiadaceae) *Aak, madar* eb 128:

20 g root paste is given orally twice a day for two days. [2, 3, 5].

*Chenopodium album* L. (Chenopodiaceae) *Bathua* eb 18:

20 ml extract obtained by grinding whole plant with a little water is given orally twice a day for two days. [1, 4].

*Cuscuta reflexa* Roxb. (Cuscutaceae) *Akashbel* eb 105:

50 ml decoction of whole plant is given orally twice a day for two days. [1].

*Citrullus colocynthis* (L.) Schrad. (Cucurbitaceae) *Indrayan* eb 38 :

50 ml extract obtained by grinding fresh roots with a little water is given orally for two days. [1].

\**Daucus carota* L. (Apiaceae) *Gajar* eb 145 : 50 ml leaf extract is given orally twice a day for three days. [1, 4, 5].

*Ficus religiosa* L. (Moraceae) *Peepal* eb 26 :  
10 ml leaf extract is given orally thrice a day for seven days. [1].

*Gossypium arboreum* L. (Malvaceae) *Kapas* eb 62:

20 g seed paste is given orally thrice a day for five days. [4].

*Hibiscus rosa-sinensis* L. (Malvaceae) *Gudhal* eb 65:

20-30 ml root extract taken orally thrice a day for three days. [1, 2, 3, 4, 5].

\**Lepidium sativum* L. (Brassicaceae) *Halim* eb 55:  
20 ml root extract given orally twice a day for a week [1].

\**Linum usitatissimum* L. (Linaceae) *Alsi* eb 140:  
30 gm seed paste is given orally thrice a day for three days [2, 4].

\**Michelia champaca* L. (Magnoliaceae) *Champa* eb 36:

50 ml root extract is give orally once a day for seven days [2, 3].

\**Momordica charantia* L. (Cucurbitaceae) *Karela* eb 70:

50 ml extract of raw fruits is given orally twice a day for five days [1].

\**Nigella sativa* L. (Ranunculaceae) *Kala zeera* eb 72 :

20 g seed paste is given orally twice a day for seven days [1, 3, 4].

\**Punica granatum* L. (Punicaceae) *Anar* eb 20:  
50 ml root extract is given orally once a day for seven days [1, 4].

\**Raphanus sativus* L. (Brassicaceae) *Muli* eb 62:  
100 g paste of raw root is given orally twice a day for seven days [1,4].

*Ricinus communis* L. (Euphorbiaceae) *Arand/Andi* eb 40:

20 g seed paste is applied externally at pudenda twice a day for seven days [1, 2, 3, 4].

*Saraca indica* L. (Caesalpinaceae) *Ashok* eb 192:

30 g paste prepared by pounding the bark with water is given orally twice a day for seven days. [1, 2, 3, 4].

*Sesamum orientale* L. (Pedaliaceae) *Kala til* eb 190:

20-30 g whole seed paste is given orally thrice a day for seven days [1].

## 5. Results and discussion

This communication records folk claims, as gathered from five districts of Uttar Pradesh, on abortifacient properties of 25 angiospermic species belonging to 25 genera and 21 families. A comparison with relevant literature [20, 21, 22, 23, 24, 25] revealed that eight claims, marked with an *asterisk*, are hitherto unreported. With the exception of *Aloe barbadensis* all taxa belong to dicotyledonous families. In five species whole plant extract is used to cause abortion. It appears that in these species bioactive compound is distributed throughout the plant body. In remaining species certain portion of the plant possesses abortifacient properties, probably due to localized accumulation of bioactive compounds.

Earlier authors also found differential efficacy of different parts of the same plant in causing abortion [26]. Three species (*Abrus precatorius*, *Citrullus colocynthis* and *Ricinus communis*) are meant for external application only. All taxa are used singly without any secondary ingredients.

Ethnobotanical leads have led to discovery of several useful drugs. It is predicted that properly designed ethnobotanical surveys may still yield important leads needed for discovery of newer drugs [27]. Therefore, there is need to undertake surveys of unexplored or under-explored regions on priority basis.

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