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## Unani medicines contraindicated during pregnancy used in neurologic diseases: A review

**Sana Qayyum and Arshiya Sultana**

### Abstract

The use of complementary and alternative medicines (CAM) is growing in the general population. Herbal medicines are used in all countries of the world and are included in the top complementary and alternative medicines therapies used. The state of carrying a developing embryo in the uterus and breast feeding by mothers need safety measures and awareness regarding adverse drug reactions. The particular dangers of these preparations occur due to the belief that they are natural and thus safe in pregnancy. Pregnant and nursing mothers should take extra caution as they are more susceptible to adverse and reactions and toxicities. Some compound in traditional medicines can cross the placenta and are clearly linked to birth defects or other problems.

Appraisal of Unani and conventional literature showed that drugs contraindicated during pregnancy are *Brinjasif* (*Achillea millefolium*) as the herb is uterine stimulant. *Sibr* (*Aloe barbadensis*) in high doses might cause accumulation of blood in pelvic region and reflux stimulation of uterine muscles, thereby causing abortion or premature birth. *Afsanteen* (*Artemisia absinthium*) when ingested in large doses can lead to epileptiform seizures and abortion. *Asaroon* (*Asarum europaeum*), *Papita* (*Carica papaya*), and *Qurtum* (*Carthamus tinctorius*) these three act as an emmenagogue. Some other unani drugs that are contraindicated in pregnancy are *Karafs*, *Baboonaj roomi*, *Shaqaaq-un-noman*, *Madar*, etc.

Therefore, such plants prior to their use should be investigated to better understand their properties, safety, and efficacy with help of clinical trials

**Keywords:** *Afsanteen*, *Asaroon*, *Brinjasif*, *Qurtum*, *Sibr*, Unani medicine

### Introduction

The condition of carrying a developing embryo in the uterus and breast feeding by mothers require special precaution in term of intake of medicine. Usage of traditional drugs requires some vigilance in respect of its adverse reactions. Since last few decades tremendous research work has been done of the various aspects of medicinal plants on pharmacognostic and chemical aspect but aspect of safety and toxicity particularly in pregnancy and lactation is the most neglecting area. These medicines are considered safer than allopathic drugs, but several plant species are proven to be toxic in these conditions. For example, volatile oil containing drugs can be abortifacient; irritant to genitourinary tract (can cause uterine contractions). Some constituents also have got action on uterus. Pyrrolizidine alkaloids can cause hepatotoxicity in newborn. Some are strong diuretic and laxative, hormonally active, mutagenic, genotoxic, teratogenic, etc. so these drugs are better avoided during pregnancy. An effort can be made to categorize those ingredients that have impending toxicity on pregnancy and their interference with other drugs based on phytochemical, pharmacological properties. Documentation of side effects and adulteration by heavy metals in accordance with classical Unani and Ayurvedic literature should be studied and duly mentioned. Details of such drugs will be discussed in the present work [1].

In the stage of organ formation most of the body organs and systems of the baby are to be formed within the first ten weeks of pregnancy. Some drugs can cause malformations of such parts of the developing fetus to the heart, limbs and facial features during this stage. In this period of organogenesis, malformations can arise from brief exposure. After tenth week, the fetus grows rapidly in weight and size. During this stage, certain drugs may damage organs that are still developing, such as the eyes and nervous system. Continuing the use of drug at this stage also increases the risk of miscarriage and premature delivery. The biggest danger drugs pose is their potential interfere with normal growth. IUGR is likely to result in a low birth weight baby [2].

Several drugs can transfer from maternal milk and cause ADR in newborn. Exposure to organo-mercury compounds can cause sluggish growth of fetus and disrupt the nervous system [3].

Traditional drugs whether Unani or Ayurvedic origin, can have adverse effects on pregnancy. It can be attributed to several factors.

- 1) Phytochemical and pharmacological properties and many documented ADR of drugs which also include acute and chronic toxicity, teratogenicity, mutagenicity etc.
- 2) Adulteration of declared ingredients intentionally or by accident by toxic drugs and undeclared medicines.
- 3) Microbial contaminations: (staph aureus, e coli, salmonella, shigella etc)
- 4) Contaminations by toxic metals (lead, cadmium, mercury, arsenic), radioactive materials and pesticides.

Adulteration by synthetic drugs: for example, with steroids, anti-inflammatory drugs etc. [4]

In this review, documented ADR of Unani drugs is been focused particularly in pregnant and nursing mothers in respect of its phytochemical and pharmacological properties along with therapeutic dose to obtain the limit for caution in pregnancy.

### Methodology

The ADR of unani medicines were thoroughly studied from authentic indexed journals, websites, textbook for traditional and conventional medicine.

### Drugs contraindicated in pregnancy

- 1) *Ablution indicum, Kanghi/ Atibalaa*: Abortifacient (plant) so contraindicated in pregnancy [5].
- 2) *Achillea millefolium linn, Brinjasif*: To be avoided during pregnancy as the herb is uterine stimulant/ abortifacient. In rare cases, cause allergic skin rashes. [6, 7].
- 3) *Acorus calamus L. Bach*: it has emmenagogue and genotoxic activity [7, 8].
- 4) *Adatida zeylanica, Adusa/ Vasaka*: Abortifacient [9, 10].
- 5) *Aloe barbandensis, Elwa/ Ghrita kumara*: large doses may lead to accumulation of blood in pelvic region and reflux stimulation of uterine muscles and may bring about abortion or premature birth or late pregnancy [6, 7, 10, 11].
- 6) *Artemisia absinthium L, Afsanteen/ Worm Wood*: When ingested in large doses can lead to epileptiform seizures and even abortion [10, 12, 13].
- 7) *Berberis aristata, Daarhild*: higher doses may interfere with vitamin B metabolism. Berberine causes a strong contraction of the isolated pregnant mouse uterus. It is a mitochondrial mutagen in yeast [4, 10].
- 8) *Borage officinalis, Gaozabaan* [10].
- 9) *Callendula officinalis, Genda*: Spermicide, antiblastocyst, and abortifacient [7].
- 10) *Calotropis procera, Madar*: higher doses cause vomiting, diarrhea, bradycardia, and convulsions [10].
- 11) *Cannabis sativa, Bhang* [10].
- 12) *Cassia angustifolia, Sanaa*: it is a laxative and contain anthraquinones which increases blood flow to uterus, may pass in breast milk and cause unwanted effects such as spasms in the infant [6, 10, 13].
- 13) *Commiphora myrrha, Murmaki* [8, 10].
- 14) *Crocus sativus, Zafran*: it may cause uterine bleeding [6, 10].
- 15) *Datura stramonium, Dhatura*: it can cause uterine contraction and miscarriage [10, 11, 14].
- 16) *Eucalyptus globulus, Nilgiri*: penetrates uteroplacental

tissue and stimulates fetal hepatic enzyme activity [4, 7].

- 17) *Ferula asafetida, Hilteet* [4, 10].
- 18) *Gossypium herbaceum, Pambadaana*: stimulates uterine contractions and hastens difficult labor [10].
- 19) *Hypericum perforatum, Balsaan*: acts as an antidepressant [8, 10].
- 20) *Lavendula stoechus, Ustukhuddos*: narcotic poison [10].
- 21) *Podophyllum hexandrum Royle, Papra*: congenital abnormalities and fetal death [11].
- 22) *Rauwolfia serpentina Linn, Asrol*: sedative and tranquillizing [11].

### Metallic drugs and metallic contaminants affecting pregnancy

All forms of mercury are teratogenic in animal tests cases of human fetal poisonings have mostly been traced to mercury vapour and organic mercurials, especially methyl mercury. Arsenic cross the placental barrier and acute maternal arsenic poisoning has been incriminated in neonatal death. Lead as a contaminant and can cause developmental deficit. [3, 15-18].

### Discussion

Drugs reviewed have got abortifacient, emmenagogue, antifertility, teratogenic, mutagenic, genotoxic, carcinogenic properties. Some drugs such as *Ruta graveolans* can even cause death of pregnant women. Some interfere in metabolism; some might cause allergy and other ADR which further lead to intake of other conventional drugs which can be harmful. Unknown pharmacological action and toxicity can also be exerted due to adulteration. As in case of switching of *Cinnamomum zeylanicum* with *Cinnamomum cassia* Blume can have ADR, as *Cinnamomum zeylanicum* contain low levels of coumarin which are safe. On the other hand, *Cinnamomum cassia* Blume contain high levels of coumarin which can cause liver damage in small group predominantly sensitive persons if consumed over a few months [19].

Beside this, some drugs also interfere in existing therapy and cause ADRs. Majority of women used these herbs during first trimester which is a most critical period in pregnancy. Interaction with prescribed medications can have unidentified effects in pregnancy or serious complications in the fetus. Professionals involved in health care should keep information regarding their possible interactions and possible risk. Their use does not have strict regulations like contemporary medicines and rising trend in the use of traditional drugs can be a matter of concern if unaware regarding its ADR. Pregnant women should also be educated to increase their awareness regarding the effects of herbal/ traditional medications and the importance of taking guidance from their healthcare provider [19].

### Conclusion

Various herbal drugs mentioned above can have adverse effect on child bearing mothers. So, these drugs and their preparations should be avoided during pregnancy. Traditional drugs should be taken under expertise supervision. It should not be taken unless benefit is more important than the potential risk. Good reproductive and child health require usage of well documented traditional drugs. The review may help health care providers in patient education and counselling them about the use of herbal and traditional medicine.

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