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PLANTS OF ZIMBABWE USED AS ANTI-FERTILITY AGENTS

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Abstract

Ethnomedicine has gained a lot of recognition in post-independence Zimbabwe and yet little research on anti-fertility medicines has been done. Information on plants used as anti-fertility medicines was obtained by interviewing women, men, traditional healers and traditional midwives in urban Harare and surrounding rural areas of Mvurwi, Seke and Chiweshe. The use of 31 species belonging to 17 families for antifertility purposes is described. This survey forms a basis to initiate a study into the efficacy and toxicology of plants used by Zimbabwean women as traditional anti-fertility medicines.

Key words: antifertility; Zimbabwe; postcoital anticonceptive; abortifacient; contraceptive.

Introduction

A well developed medical system was in existence well before the advent of modern medicine in Zimbabwe. The use of plants for medicinal, mythical and fertility regulating purposes has been practised in Zimbabwe for centuries. However, because fertility was very highly regarded and associated with the preservation of the tribe (*dzinza*), contraception was not openly discussed. Like most traditional societies, large families were especially prized (Bourdy et al., 1992). The 1994 Zimbabwe Demographic and Health Survey reports that contraceptive use prevalence rate was 35 % for all women. Interestingly, 2 % of women interviewed in this survey of 1994 indicated that they used "folk" methods of contraception (Central Statistics Office, 1994). No data has been published about the folk methods of contraception in Zimbabwe. We, therefore, set out to compile a list of anti-fertility medicines used by Zimbabwean women and their method of use. The survey was carried out to initiate a study into the efficacy and toxicology of plants used by Zimbabwean women as traditional anti-fertility medicines.

Methodology

Information on folkloric use of plants as anti-fertility agents was obtained from the literature (Gelfand et al., 1985) and through direct interviews with urban and rural men and women, traditional midwives (*nyamukutas*) and traditional healers (*n'angas*) referred to us by the Zimbabwe Traditional Healer's Association (ZINATHA) head office, Harare. Both male and female *n'angas* specialising in female reproductive problems were interviewed. Information was obtained from urban Harare and from rural Mvurwi, Seke and Chiweshe areas. Informed consent was obtained from all interviewees. No plant specimens were collected, but when people interviewed knew the shrub but did not know the name of the plant, samples of the aerial parts of the plant were taken to a botanist for identification and authentication. Survey work was carried out intermittently between 1998 and 2002. Information on potential toxicity is also supplied, quoted from the work of Gelfand (1985).

Results

At least 31 plant species belonging to 17 families are used for antifertility purposes in Zimbabwe. We learnt that Zimbabwean traditional antifertility methods may be classified into four broad classes:

- 1) *Mukutura/Nyamukutura*, which means, "to spill". Plant part is air dried and then ground into a powder. Powder in porridge, infusion or decoction is taken orally the morning after sexual intercourse to "spill" the male seed (Table 1). These plants may have post-coital contraceptive effects.
- 2) *Kurera*, which means to "look after and allow to grow". Herbs in this class are contraceptives taken for child spacing purposes. Herbal preparation is taken orally after weaning and periods of effectiveness are varied, but commonly require daily intake. Alternatively, a "zango", a talisman of part of a plant (root, stem, bark or seed) is tied around the waist. It is claimed that as long as the *zango* is around the waist, pregnancy will not occur. When one is ready to conceive, the *zango* is broken off thus reversing the contraceptive effects (Table 2).
- 3) Abortifacients may be used as a birth control method. Abortion remedies are administered orally or by introduction of the medicine into the vagina or cervix to induce premature labour. *Nyamukutas* and some *n'angas* are well aware of plants with abortifacient activity and despite the fact that abortion is illegal in Zimbabwe, except under special circumstances, a wealth of information was available from interviews most of which was in agreement with literature (Gelfand et al., 1985).
- 4) Abstinence was encouraged in the traditional lifestyle, and the abstinence period began with pregnancy (sexual relations during pregnancy were thought to endanger the foetus) and lasted until weaning - in most instances. There are claims that both men and women can take herbal medicines to suppress sexual drive. We were however unable to get names of plants used for abstinence. However, male polygamy, an acceptable traditional practice, promoted abstinence by the woman while the man continued having an active sex life with the other wife or wives.

Poisonous plants (as reported by Verdcourt and Trump & Gelfand et al., 1985)

1. *Desmodium barbatum* (*chinzungunzungu*): In two reported cases of attempted abortion, insertion of the root into the vagina caused death (National Herbarium Poisonous Substances File, *sub nomine*, Umvuma CR9/3/74 and Mashaba SDD1/76, Zimbabwe).
2. *Trichilia dregeana*: This was prescribed as an enema to a man suffering from stomach ailment and the patient later died (National Herbarium Poisonous Substances File, *sub nomine*, Chipinge CR15/5/75, Zimbabwe).
3. *Croton megalobotrys*: Whole plant is poisonous although there are no reported cases caused by it.
4. *Ricinus communis*: All parts of this plant are poisonous especially the seeds.
5. *Cucumis hirsutis*: Prescribed to a man for venereal disease who later died after a bout of vomiting (National Herbarium Poisonous Substances File, *sub nomine*, Cashel SDD3/74, Zimbabwe).

Table 1: Plants used as *mukutura/nyamukutura* (post-coital contraception).

Family/Species	English name (<i>Vernacular name</i>) ^a	Part used	Preparation
URTICACEAE	Soap brush		
<i>Pouzolzia hypoleuca</i>	<i>Munanzva</i> (Sh) <i>Isikhukhukhu</i> (Nd)	Roots	Powder taken orally with porridge or infusion morning after sexual union.
VITACEAE			
<i>Ampelocissus obtusata</i>	<i>Mudzambiringa</i> (Sh)	Leaves	Infusion taken orally morning after sexual union.

Discussion

These results show that suppression of fertility was a thriving practice even in the era when fertility was highly regarded. Despite the availability of modern contraceptive methods, for economic reasons women

Table 2: Plants used for *kurera*, contraceptives for child spacing.

Family/Species	English name (<i>Vernacular name</i>) ^a	Part used	Preparation
APIACEAE			
<i>Heteromorpha trifoliata</i>	<i>Dombwe</i> (Sh)	Root	Powder mixed with porridge or infusion taken orally
ASTERACEAE			
<i>Schkuhria pinnata</i>	Dwarf marigold <i>Ruhwahwa</i> (Sh)	Whole plant	Infusion taken orally
<i>Vernonia amygdalina</i>	<i>Musikavakadzi</i> (Sh) <i>Inyathelo</i> (Nd)	Root	Infusion taken orally
BIGNONIACEAE			
<i>Kigelia africana</i>	Sausage tree <i>Mumvee</i> (Sh) <i>Mubveve</i> (Sh) <i>Umvebe</i> (Nd)	Root bark	Powder mixed with porridge or infusion taken orally
EUPHORBIACEAE			
* <i>Ricinus communis</i> (Poisonous)	Castor oil plant <i>Mupfuta</i> (Sh) <i>Umhlafutho</i> (Nd)	Seed	Peeled whole seed taken orally once a year
<i>Securinega virosa</i>	Snow berry <i>Muchagawuwe</i> (Sh) <i>Umhakawuwe</i> (Nd)	Roots	Powder or infusion taken orally just before sexual intercourse
FLACOURTIACEAE			
<i>Flacourtia indica</i>	Bakota plum <i>Mutunguru</i> (Sh) <i>Munhunguru</i> (Sh) <i>Umthunduluka</i> (Nd)	Root Leaf	3-6 root pieces in <i>zango</i> around the waist OR leaf infusion taken orally
MIMOSOIDEAE			
<i>Dichrostachys cinerea</i>	Chinese lantern <i>Mupangara</i> (Sh) <i>Ugagu</i> (Nd)	Root	3-6 root pieces in <i>zango</i> around the waist
RHAMNACEAE			
<i>Ziziphus mucronata</i>	Buffalo thorn <i>Muchecheni</i> (Sh) <i>Umphafa</i> (Nd)	Root bark	Powder mixed with porridge or infusion taken orally
RUBIACEAE			
<i>Fadogia ancylantha</i>	Makoni tea <i>Musvisvinwa</i> (Sh)	Root	3-6 root pieces in <i>zango</i> around the waist

^a Sh = Shona; Nd = Ndebele

* Poisonous plant

continue to use medicinal plants for contraceptive purposes. Furthermore, because abortion is illegal in Zimbabwe, young girls who find themselves with an unwanted pregnancy resort to using abortifacient plants to get rid of the pregnancy. We have identified 31 species in 17 families used in Zimbabwe as antifertility agents. Worldwide, there is continuing hope that a traditional plant may provide an efficacious, safe and reliable contraceptive method (Nath et al., 1992; Farnsworth et al., 1975). The World Health Organisation has supported work towards the development of such a goal (Farnsworth et al. 1975; Garg et al., 1978; Rao et al. 1979). This survey forms a basis for implementing a research program to study the efficacy and toxicology of plants used by Zimbabwean women as traditional anti-fertility medicines.

Table 3: Plants used as abortifacients. ^a Sh = Shona; Nd = Ndebele, * Poisonous plant

Family/Species	English name (<i>Vernacular name</i>) ^a	Part used	Preparation
APIACEAE			
<i>Steganotaenia araliacea</i>	Popgun tree <i>Mugodorapfuti</i> (Sh) <i>Mupomboshori</i> (Sh) <i>Musvodzambudzi</i> (Sh)	Root	Infusion taken orally
APOCYNACEAE			
<i>Holarrhena pubescens</i>	Jasmine shrub <i>Mukashumukono</i> (Sh)	Root	Inserted into vagina
ARITOLOCHIACEAE			
<i>Aristolochia heppii</i>	Wild Dutchman's pipe <i>Chividze</i> (Sh)	Root	Infusion taken orally
<i>Aristolochia petersiana</i>	Wild Dutchman's pipe	Root	Infusion taken orally
ASTERACEAE			
<i>Vernonia glabra</i>	Cornflower vernonia	Root	Inserted into vagina
<i>Schkuhria pinnata</i>	Dwarf marigold <i>Ruhwahwa</i> (Sh)	Whole plant	Infusion taken orally
CANELLACEAE			
<i>Warburgia salutaris</i>	<i>Muranga</i> (Sh)	Bark	Decoction taken orally
CUCURBITACEAE			
* <i>Cucumis hirsutus</i> (Poisonous)		Root	Infusion taken orally
EUPHORBIACEAE			
<i>Bridelia micrantha</i>	<i>Mushungunu</i> (Sh)	Leaves	Infusion taken orally
* <i>Croton megalobotrys</i> (Poisonous)	<i>Muchape</i> (Sh) <i>Mugubvuka</i> (Sh) <i>Umtshape</i> (Nd)	Bark	Powder taken orally in porridge
* <i>Ricinus communis</i> (Poisonous)	Castor oil plant <i>Mupfuta</i> (Sh) <i>Umhlafulutho</i> (Nd)	Leaves/ stem	Inserted into vagina
FABACEAE			
<i>Cassia abbreviata</i>	Long pod cassia <i>Muremberembe</i> (Sh) <i>Muvheneka</i> (Sh) <i>Isihaqa</i> (Nd)	Root	Infusion taken orally
MELIACEAE			
* <i>Trichilia dregeana</i> (Poisonous)	Forest Natal mahogany <i>Mutsikiri</i> (Sh)	Bark	Infusion taken orally
<i>Trichilia emetica</i>			
PAPILIONOIDEAE			
* <i>Desmodium barbatum</i> (Poisonous)	<i>Chinzungunzungu</i> (Sh) <i>Hazviere</i> (Sh) <i>Zanzi</i> (Sh)	Root	Inserted into vagina
<i>Indigofera arrecta</i>	<i>Mukatapeta</i> (Sh)	Root	Inserted into vagina
<i>Indigofera demissa</i>		Root	Inserted into vagina
<i>Indigofera rhychocarpa</i>		Root	Inserted into vagina
PEDALIACEAE			
<i>Ceratotheca triloba</i>	False fox gloves <i>Zinyaruninga</i> (Sh) <i>Inkuzane enkulu</i> (Nd)	Whole plant	Infusion taken orally
SOLANACEAE			
<i>Capsicum frutescens</i>	Peppers <i>Mhiripiri</i> (Sh) <i>Ibilebile</i> (Nd)	Root	Inserted into vagina

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