



# Traditional practices, beliefs and uses of medicinal plants in relation to maternal–baby health of Criollo woman in central Argentina

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Received 20 March 2006; received in revised form 23 October 2006; accepted 21 December 2006

## Abstract

**Objective:** to present information on traditional practices and medicinal uses of plants for treating health diseases related to the reproductive cycle of Criollo women living in the hills of the province of Córdoba; and to interpret these uses in the context of this population's folk medicine.

**Design:** data were collected during several field trips to the study area based on the guidelines of a research project that included ethnographic and ethnobotanical aspects of the study area.

**Setting:** a rural community of central Argentina.

**Participants:** a total of 62 peasants were interviewed on the basis of a semi-structured system. Repeated open and extensive interviews were also undertaken with seven women who had previously worked as midwives in areas of difficult access.

**Findings:** this study found that 12 different female diseases and complaints are treated using a total of 48 plant species belonging to 27 botanical families, with 71 different medicinal uses. The traditional beliefs and practices associated with maternal–baby health care in rural areas highlights the existing combination of principles reformulated from humoral medicine, the use of analogical reasoning, and ontological and functional interpretations of morbid processes. The principle of Hypocritical opposition and hot–cold categorisation are significant criteria that rule over the practices of mother and child health care during birth and puerperium.

**Implications for practice:** consequences of traditional knowledge on the health care of peasant women are discussed, based on the analysis of traditional practices from a peasant's point of view.

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**Keywords** Maternal–baby health; Ethnomedicine; Traditional practices; Medicinal plants; Argentina

## Introduction

The reproductive health of peasant women, particularly the practices and care during the process of

birth (pregnancy, conception, postpartum and care for the mother and newborn baby), is an important issue for rural maternal–baby health programmes and policies. The aim to use intercultural medical

approaches encouraged by the World Health Organization (Akerele, 1984), and the legitimate knowledge and role generally conferred to midwives by the communities, has increased the interest of investigators in traditional birth attendance (Anderson, 2004) and women's health during the process of labour. Various studies have described traditional midwifery beliefs and practices (Cosminsky, 1978; Lang and Elkin, 1997; Rice, 2000; Liulan et al., 2003), as well as the social and medical appraisal of traditional obstetric practices (Jordan, 1989; MacCormack, 1989; Parra, 1993). Furthermore, traditional use of plant pharmacopoeia for the reproductive cycle of women has been described throughout the world (Bourdy and Walter, 1992; Veale et al., 1992; Varga and Veale, 1997), including Latin America (Arenas and Moreno Azorero, 1977; Browner, 1985; Bourdy and Walter, 1992; Ososki et al., 2002; Ticktin and Dalle, 2005).

The traditional medicine of Argentina is embedded in a complex ethnomedical system that co-exists with official medicine or biomedicine, alternative medicines and religious therapies, and is characterised by three types of practice: shamanism, native healers and home-made medicine or self-treatment (Idoyaga Molina, 1999a, 2002a, b). The first is still present in aboriginal communities, whereas the other two are applied among non-indigenous Criollo peasants in rural and urban areas of Argentina. Despite this cultural diversity, intercultural health management and the incorporation and comprehension of the beliefs held by these ethnic minorities by biomedical professionals is still far from being a reality (Arrue and Kalinsky, 1991; Idoyaga Molina, 1997, 2000a). The investigation of traditional knowledge, beliefs and practices relating to women's reproductive health, in order to understand and find explanations for them, is a starting point towards the search for more successful maternal–baby health strategies. Some ethnographic investigations have already been undertaken among peasant women in Argentina, especially in the north-west (Palma, 1978; Pérez de Nucci, 1988; Bianchetti, 1989; López, 2001), in the Andean–Patagonian area (Arrue and Kalinsky, 1991; Chiriguini et al., 2001) and among peasants who have migrated to urban areas (Idoyaga Molina, 1997, 1999b). Nonetheless, there are no existing references for central Argentina.

The following study documents the use of medicinal plants for female reproductive health treatments in a rural community in central Argentina. The aim of this investigation was to present information on the traditional practices and medicinal uses of plants for treating diseases related to the reproductive cycle of Criollo women living in

the hills of the province of Córdoba, and to interpret these uses in the context of this population's folk medicine.

## Methods

### Study area

The city of Córdoba, capital of the province of Córdoba, is the second largest city in Argentina after Buenos Aires. The region of Calamuchita is located south-west of this city, and is characterised by a significant influx of national and international tourism. Although it has important historical settlements of the today extinct 'Comechingones' native tribe, as well as an important Jesuit cultural heritage, there are no known studies on the medicinal plants of the area (Fig. 1). The climate of this region is semi-humid in summer, with maximum temperatures ranging between 28 and 36 °C, and semi-dry in winter, with minimum temperatures ranging between 8 and 14 °C. The mean annual rainfall varies from around 700 to 900 mm, decreasing towards the west as the altitude increases. The vegetation of the area consists of the 'Espinal' province and the 'Chaco Serrano' district of the 'Chaco' province, featuring xerophytic vegetation (vegetation needing very little water), alternated with shrubs and high altitude grasslands. The most common plants are *Prosopis alba*, *Prosopis nigra*, *Aspidosperma quebracho-blanco*, *Celtis tala*, *Celtis iguanaea*, *Acacia caven*, *Geoffroea decorticans*, *Lithraea molleoides*, *Fagara coco* and *Kageneckia lanceolata*. The main aromatic and medicinal shrubs are *Lippia turbinata*, *Aloysia gratissima*, *Mintosthacys mollis*, *Baccharis crispa* and *Baccharis articulata* (Luti et al., 1979; Cabrera, 1994).

Historically, the complex culture of the Comechingones developed in the area, originated by a patchwork of different agricultural cultures that appeared successively, interacting along time, and finally merged into one culture between 1000 and 1200 AD. On the arrival of the Spaniards, this culture was distributed throughout most of the province of Córdoba (Benso, 1994; D'Andrea and Nores, 1996; Signorile and Benso, 2000). After the Spanish conquest, these communities suffered a demographic collapse, although there is still evidence of the presence of Comechingones until the beginning of the 18th Century. After the conquest and foundation of the city of Córdoba, and after a strong Jesuit influence, the Criollo culture arose as a combination of aborigines and

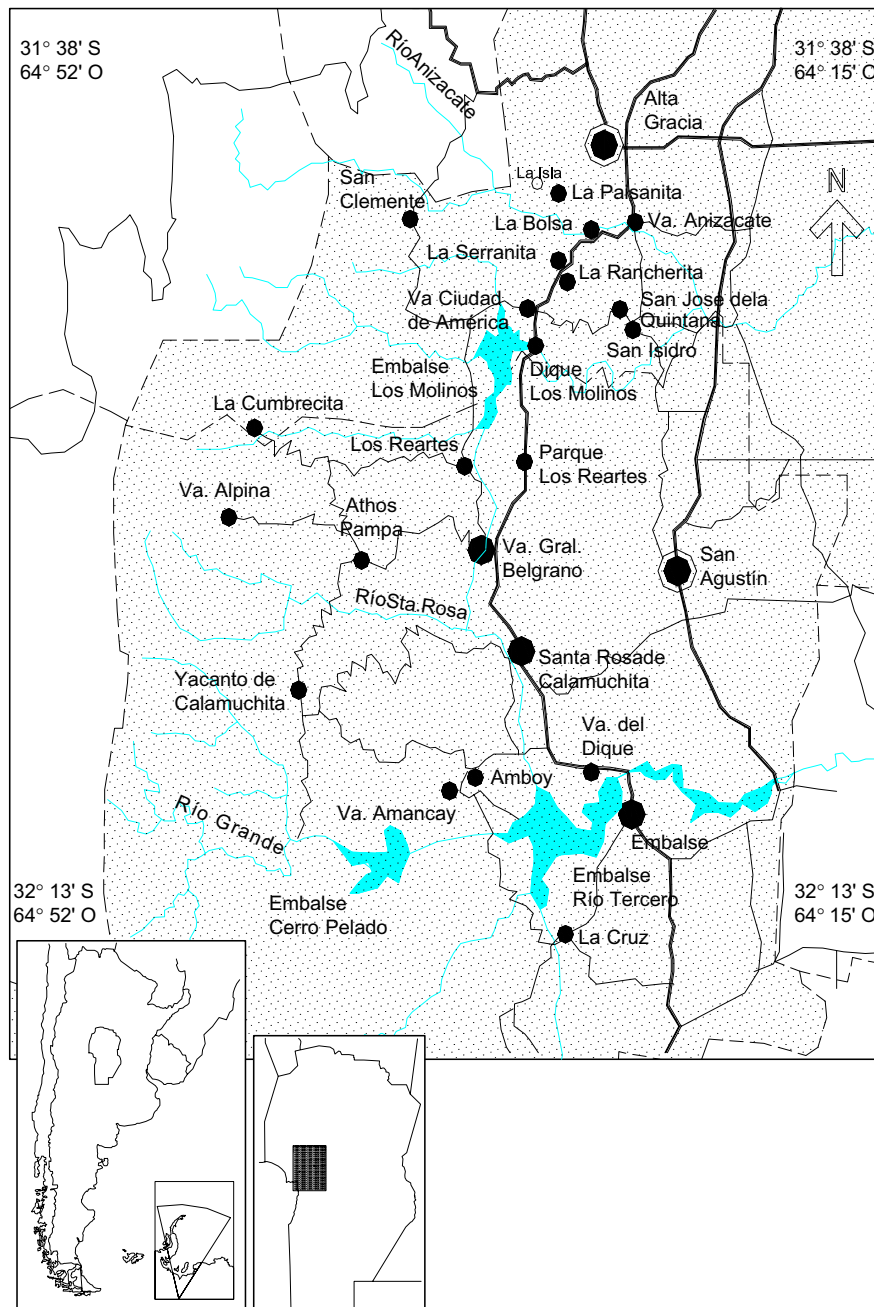


Figure 1 Location of the study area.

Spaniards or their descendants. Between the 19th and 20th Centuries, the European influence, mainly Spanish and Italian, was reinforced as a consequence of the immigration waves. Today, the population of the area is highly heterogeneous, as different groups have settled there. Criollo peasants now live side-by-side with immigrants from the last century, as well as city dwellers who have come from Córdoba city and other urban centres.

The following ethnobotanical study looks at the knowledge of the Criollo peasants of the region. These Spanish-speaking peasants are mainly de-

pendant on agriculture and cattle farming, with some small estate owners involved in bovine and goat breeding. Their work force primarily consists of family members, with some temporary or permanent employees, and they are mainly dependent on forest resources for domestic uses such as energy, rural buildings and foraging. Their income comes from activities linked to tourism (horse rental or selling regional products such as medicinal herbs, sausages and cheese), breeding and selling their own cattle or as wage earners (Martínez, 2003).

The Criollo peasants use public health dispensaries located in nearby towns, as well as hospitals and medical consulting offices in the larger cities of the area (e.g. Alta Gracia, Villa General Belgrano and Santa Rosa de Calamuchita). However, although official medicine and alternative therapies are readily available, the use of healers and traditional home-made medicines is still firmly established among the Criollos of Córdoba. These traditional practices originated from a combination of indigenous knowledge and European beliefs that trace back to the time of the Spanish conquest (14th Century). They were subsequently reinforced by the European immigrants of the last two centuries, which explains why these practices are so similar to the folk medicine of other Argentinean regions as well as to traditional Hispanic–European medicine (Martínez and Planchuelo, 2003). Previous ethnobotanical studies have shown that the Criollos of this area use a vast plant pharmacopoeia. To date, 189 species with 754 different medicinal applications have been recorded in this region (Martínez, 2003; Martínez and Planchuelo, 2003).

Even though the care of pregnant women and births is mainly the responsibility of regional health-care centres and hospitals, a full body of traditional beliefs concerning the female health remains in force in the Criollo medicine context and currently co-exists with biomedical sanitary practices. Therefore, under these circumstances, responsibility for the pregnant women and her parturition lies with the hospital obstetricians and gynaecologists, assisted by professional nurses. However, there is a notorious breach regarding midwives. The work of professional midwives is unknown in this area, and there is no interaction with the traditional midwives who render their services in the community.

### *Data collection and conceptual framework*

Data were collected during several field trips to the study area between 2001 and 2004, based on the guidelines of a research project that included the ethnobotanical aspects of the study area. In all, 62 peasants were interviewed on the basis of a semi-structured system. The selection criterion used for the informants was that they be native inhabitants of the area, recognised as knowledgeable by their neighbours. The age of the interviewees ranged from 26 to 88 years of age, and the midwives were all over 70 years. Participants aged between 66 and 75 years were asked the most questions.

Repeated open and extensive interviews were also undertaken with seven women who had

previously worked as midwives in areas of difficult access, but who were no longer in practice owing to the expansion of biomedical services.

The interviews were taped and recorded in field notebooks. A particular item was only included in the study when at least two individuals mentioned it for a specific use. After obtaining such information, plant samples were collected with the assistance of individuals, and their vernacular names were registered. The plants were then botanically identified by the author, and herbarium specimens were included in the herbarium of the Faculty of Agronomic Studies of the National University of Córdoba, under the acronym of ACOR. Finally, over 45 hours of taped material was archived by the author.

The study focuses on the beliefs and health representations concerning the reproductive aspects of women (menstruation, conception, pregnancy, birth, postpartum care, nursing and midwifery, sterility, menopause and birth control), and on the use of plant pharmacopoeia to treat women's complaints. This brings forth the need to comprehend and interpret the logic with which peasants view illness and healing. Traditional peasant medicine is centred on the patient and, when certain preventative and therapeutic practices have to be carried out, it is first necessary to identify, from a peasant's point of view, the causes of the affection, the state of the body or both (Martínez and Planchuelo, 2003). Laplantine's proposal (1999) conceives universal models to explain the aspects and causes of diseases, as well as the consequential therapeutic practices associated with this aetiological view. Laplantine (1999) contrasts the relational aetiological model, which considers normality and pathology in terms of harmony and disharmony, with the ontological aetiological model, that puts the disease before the patient; thus, instead of disequilibrium, the illness constitutes an isolatable substance or ontological entity located in a precise region of the body. The therapies corresponding to each of these views will aim to either reinstate the body's equilibrium or isolate and identify the morbid agent, respectively. Other aetiological hypotheses, such as exogenous/endogenous, additive/subtractive aetiological models, enrich this proposal. In the exogenous model, illness is produced by an external element, real or symbolic, which can be an evil will or a natural harmful agent; on the contrary, in the endogenous model, disease is caused by a characteristic inherent to the organism itself. These aetiological concepts are related to exorcist or admittance therapies, which either expel or add elements. Finally, the additive model is based on the idea that illness is a bad substance that penetrates the body and therefore needs to be expelled (using subtractive therapies).

On the contrary, the patient can also suffer a loss or lack of something that must be restored; this comprises the subtractive model that is opposed by additive therapy.

## Findings

The study found that 12 different female diseases and complaints are treated using a total of 48 plant species belonging to 27 botanical families, with 71 different medicinal uses. Thus, 21% of the medicinal species collected during the ethnobotanical study of this region, and 8% of the general uses of these species, are related to the reproductive health of women. The plant species in alphabetical order are listed in Appendix A. Also included are voucher specimen code, local names, botanical family, how to obtain it, local popular medicinal uses (ascribed therapeutic effect), the part of the plant that is used, method of preparation, method of administration, prescriptions and general consensus (based on the quantity of uses reported). The greatest medicinal use of these specimens concerns the treatment of menstrual irregularities (amenorrhoea), followed by abortifacients and oxytocins (Table 1).

### Conception, pregnancy and birth

Although menstruation is generally considered a disease by the older participants interviewed, it is

also considered a relevant event, the date of which is necessary to predict the date of birth. The absence of a normal menstrual cycle and amenorrhoea are matters of concern explaining why the list of medicinal uses is headed by emmenagogue plants, with *Anemia tomentosa*, *Tripodanthus flagellaris*, *Lippia turbinata* and *Trixis divaricata* being the most commonly mentioned species (see Appendix A). The evident morbid and impure connotation of menstrual blood also makes it a vehicle of action for inflicting maladies and diseases when it is added surreptitiously to a beverage or food.

The peasant rationale blames any complications that arise during gestation, birth or with the baby's health on misdemeanours or neglect by the pregnant mother, particularly concerning her nutrition and daily activities. According to the interviewees, a pregnant woman must avoid all kinds of frights, unsatisfied cravings or desires for certain foods (sweets or fruits), or seeing or encountering a specified person; on account of this carelessness, these situations can delay labour and even threaten of miscarriage. A way of avoiding the consequences of these vehement desires for food is to eat a preparation made of water, cinnamon and sugar. Fatty foods (such as butter, chicken soup and peanuts) are discouraged; failure to comply with this measure risks the normal development of labour and is associated with slow births. Spicy foods are also forbidden for fear of the child developing hives. Likewise, certain activities, such

**Table 1** Number of medicinal uses for feminine ailments.

Indication (ascribed effect)	Number of uses
Health condition of the woman	
Treatment of vaginal infections	6
Alleviation of dysmenorrhoea and pelvic pain	3
Treatment of amenorrhoea and regulation of menstruation (emenagogic)	15
Treatment of menorrhoea (profuse or prolonged bleeding)	1
Avoidance of conception (contraception)	4
Enhancement of fertility and treatment of sterility (fertility)	3
Pregnancy and delivery	
Promotion of abortion (abortifacient)	14
Expulsion of the retained placenta and facilitation or induction of birth (oxytocic)	7
Promotion of postpartum restoration	3
Child	
Healing of the umbilical cord (cicatrization)	5
Encouragement of lactation (galactogenic)	6
Treatment of child illnesses	1
Menopause	
Treatment of menopausal hot flushes, palpitations, anxiety	4



as knitting, crossing fences, wrapping up objects, sweeping or sewing with an electric sewing machine or needles, are considered hazardous because they may cause the baby to become tangled up with its umbilical cord.

In many cases, it is possible to identify the implicit logic that lies behind these beliefs, with the morbid, preventive or therapeutic actions arising from the analogy with certain properties of the objects or ingredients used (e.g. vegetables). Thus, the therapeutic procedures, bans or food restrictions are based on the symbolic nature of the step from being 'healthy' to being 'sick', which can be prevailed by the transference of the property of a certain object or food to the patient. The following expressions that support this analogical way of thinking were encountered:

...what is bad is for example walking, many walks, jumping, to jump, crossing fences, all those things... or sewing, sewing with a sewing machine, the movement of the machine... because it makes the cord coil up, almost all the times we have seen this it coils around the neck, it is caused by the number of times one crosses, it makes it coil around, and also by the movement of the baby that moves in the same way that the mother does. (P., Los Molinos)

What one can't do is to wind wool into a ball, to make balls, because that causes the umbilical cord to wind up. (V., La Cumbrecita)

Faced with the imminence of labour, different criteria are used to predict the exact moment of birth. These include knowing and recording the last date of menstruation, identifying physical characteristics and the size of the abdomen, and phases of the moon during the last period of pregnancy:

You start realising by the urine, and then I go and measure various times. When there is a space of four fingers below [the stomach's mouth], when it is that low it is more or less ready... all the area of the hip hurts the mother... For example, as we are in the waning quarter of the moon it will almost certainly not be born, you have to wait for the first quarter before it arrives... they [the births] are almost always in the new moon, or in the waxing moon, you have to see how the moon changes to wait more or less. If you are sick you look at the moon and that way you can more or less calculate how many days are missing; for example, if a lady calls me and I go and visit her and see how things are going on and ask her for facts such as the last time she was ill [menstruated] and that way you can calculate... (P., Los Molinos)

Several procedures accompany and help midwives' work, e.g. 'blowing the bottle', being 'tossed in a blanket' and massages or 'rubblings' that provide warmth. In the first case, the pregnant woman blows strongly into an empty bottle, helping the expulsion of the baby with the mechanical effort of blowing. The act of 'tossing with a blanket' consists of putting the pregnant mother in a blanket, gently moving her in the direction the baby must adopt in order to correct the position of the baby.

The predictions based on the phases of the moon and the act of 'tossing with a blanket' highlights the analogical relationship mentioned previously. This relationship is demonstrated by the similarity between the first quarter of the moon and the appearance of the baby. Consequently, the change of the mother's position with the blanket is transferred to the baby, which is moved into the right place.

The act of 'rubbing' or massages warms the body, and it is an ancestral technique that has been described, and is still applied, in many regions of America (Cadaxa, 1994); it is also in accordance with additive therapeutic representations (Laplantine, 1999):

When a woman is very close to labour, a sort of water-bag is formed and when it breaks you must try to make the child be born because if not it will asphyxiate... [my father] would oil his hand, put the medicine on it and warm the belly first so it would have a bit more action. (H., La Bolsa)

The descriptions of rural labours do not coincide with the most appropriate position to adopt, although there is a general preference for woman to remain in either a horizontal position or confined to a hard bed. The husband, or another relative, is sometimes found next to the midwife, supplying any necessary elements such as water, towels, scissors, alcohol and wads of cloth:

There it would only be us [with the husband] if she likes or not if she is embarrassed... (P., Los Molinos)

The use of oxytocics as birth facilitators is less common than their use for expelling the placenta; cider tea, *Zea mays*, *Urtica urens* and a gold ring were all been mentioned specifically for the latter purpose. Religion and the supernatural are also important for easing labour, so it is common to hear midwives saying prayers such as the Creed, the Holy Father, or praying for the protection of certain saints like San Ramón Neonato.

### *Postpartum: care of the mother and newborn baby*

Once the baby is born, it is necessary to concentrate on the vital signs of the baby, heal the umbilical cord and provide special treatment for the placenta and the mother. Placental retention and heavy bleeding are both problematic situations that can eventually lead to a dangerous infection. Therefore, it is not surprising that seven of the alluded medicinal species are used for the removal of the placenta, the favourite being the aerial parts of *Tripodanthus flagellaris*, *Ruta chalepensis* and *Tanacetum parthenium*.

One of the most important issues for the health of both mother and child is attaining a thermal equilibrium between the organism and its fluids. In this sense, many premises, reformulated from humoral medicine, are currently in force in the Criollo ethnomedicine. Consequently, the concepts of 'hot' and 'cold' are used for the classification of diseases, foods, therapies and plants; the principle of Hypocratical opposition is also of relevance in the diagnosis and treatment of diseases (Martínez and Planchuelo, 2003). This feature of peasant ethnomedicine, with origins in the Old World, is widely distributed throughout America (Foster, 1953, 1994; Currier, 1966; Idoyaga Molina, 1999a, 2000b). The theories of humoral medicine and the notions of hot and cold have also been found among Criollo peasants and 'mestizos' of north-west Argentina (Idoyaga Molina, 1999c, 2000b), Cuyo (Idoyaga Molina, 1999a), the Litoral (García and Jiménez, 1986), and in ethnobotanical studies undertaken in the provinces of Salta (Hilgert, 2001) and Chaco (Scarpa, 2000a, b, 2004a, b). On the basis of these theories, it is believed that many illnesses and diseases involve an imbalance caused by excessive heat or cold, which is why the subsequent therapies try to re-establish this balance using 'hot' or 'cold' plants. This paper will now describe how the beliefs regarding, for example, a labouring woman's vulnerability to cold water, capacity to breast feed and postpartum care of the placenta are based on the still currently valid principle of hot-cold categorisation and representations associated with a relational or functional aetiological model according to Laplantine's terms (1999).

Several of the interviews provided evidence of the quality of warmth given to blood, which is why its loss predisposes the person to catch 'cold' illnesses. Pregnant women are considered to be in a very 'hot' state; a situation that changes drastically after labour, with the newborn baby taking its mother's warmth with it (Cosminsky, 1978; García

and Jiménez, 1986; Katz, 1997). Hence, during menstruation and puerperium, women are more vulnerable to cold agents and, therefore, as mentioned by other authors, cold symptoms usually seem to be related to gynaeco-obstetric affections (Randall, 1993; Anderson, 2004). This 'temperature logic' provides an explanation for therapies aimed at reconstituting a woman's postpartum equilibrium (e.g. baths and treatments based on warm remedies), and the avoidance of all cold agents. Together with the administration of 'hot' foods, the interviewees advised the use of warm baths and heat during puerperium, which is widely practised in other areas of Latin America (Cosminsky, 1978; Katz, 1997; Lang and Elkin, 1997).

...we wash it with rue and 'altamisa', they are anti-spasmodic, for after they have had it [the baby]... after the placenta comes out, it is used for cleaning...it is used for washes... but it has to be a light tea, as it is hurt it must be something very light... you have to use rue because rue is hot. (P., Los Molinos)

In home births, the midwife receives the placenta in a bowl, wraps it up in a cloth and buries it behind the house or somewhere further away. This must be done quickly, before the placenta has cooled-down, as this would cause the mother to lose her ability to breast feed. This tradition, also found among peasants of Catamarca (north-west Argentina), is attributed to pre-Hispanic origins by some authors. The association between the breast of the earth and of the mother has been interpreted as a means of protection and respect for 'Mother Earth', a characteristic strongly held by Andean cultures (Mariscotti de Görlitz, 1978). However, although the community under study shares the same custom, Manicotti's interpretation cannot be extended to it because of the strong European influence that exists in this population. On the contrary, the risk of disease presented by the placenta when it is not carefully managed, and the insistence of burying it while still warm, follows the logic of preserving the equilibrium of temperature sustained by Hispano-European traditions. In corroboration, the interviewees pointed out the following:

The placenta was taken out to a virgin place that was not used... for example a place in the house, a corner, where it would not be stepped on, a hole or a ditch, and there we would put ashes beneath, and then the placenta on top and cover it up...because they say that, I don't know why, they are secrets from before as my grandmother says, she says that it is for the mother

not to get spasms, because if you get spasms then you get haemorrhages or something like that and then it paralyses you, of course you must never catch cold because she was opening her legs and the cold was coming in and that is bad for you...sometimes...and the placenta is warm... (P., Los Molinos)

The insistence of a recent mother avoiding any contact with water is explained similarly. If this rule is not abided by, it can lead to the inability to breast feed and severe illnesses, which can even put the mother's life at risk. This midwife commented:

If you get wet during the 40 days after delivering a baby your next birth comes out wrong. Only after 40 days. Nowadays babies are put into water as soon as they are born. That is where the evilness of people comes from; there is so much illness now. Why? Because the women have baths...that is where all the diseases come from, cancer and all that that comes out in women's breasts. Because they get wet, but the people don't understand this; as soon as they give birth they are having baths. My mother would advise me never to get wet when I had the baby. You couldn't wet anything, your body, your face, anything for 40 days. If not it is bad for you, you get haemorrhages. For example if you wet your hands when the baby is born your milk dries out, the person's milk disappears, it is 'cut'. That is why people take care, so as not to get chills...if you don't take care for 10 or 12 days. The chill is a cold you get, and the chill goes to your back. It has happened to me. If you wet your hands or wash your face, that is where you get the draught of air. Before, they would rub your back with a slab of camphor oil to calm the chill so the milk wouldn't dry out. Now nobody does that. (I.R., San Ignacio)

As well as the mother, the newborn baby is also susceptible to these changes in temperature and risks suffering chills, which is why certain plants and warming substances are used to prevent or restore these imbalances:

We used to give rue, a rue tea, once it is born—now you don't even do that—[to treat the newborn baby] ...you used to get a bowl with warm water, and wash it thoroughly, then dry it and put alcohol on the head so it wouldn't feel the air... because you might lift it up and being so small it could catch a draught of cold air... and this could be very bad for it because it could end up very paralysed or something of the sort, or its vision or an arm. (P., Los Molinos)

As we have seen, the lack of maternal milk can be originated by a chill, although this is usually a reversible situation. A total of six species or galactogenic preparations were collected from the area, all generally used as foods or beverages. There is a common consensus of the use of 'yerba mate' (*Ilex paraguariensis*), 'potato peelings' (*Solanum tuberosum*) and 'doca' (*Morrenia brachystephana*), emphasising their importance.

The analogical transference of properties is once again demonstrated in the habit of combing the mother's breast when there is insufficient milk production, trying to eliminate any lumps and giving way to the liquid. Rubbing a child's back with flour during weaning is also recommended; a practice that represents the transference of the flour's drying properties to the mother's breast.

The baby's umbilical cord is generally tied with a piece of sewing thread four fingers away from the baby's body, and is cut with a pair of scissors after being disinfected with alcohol. Different substances are used to cauterise the belly button, including alcohol, ashes from clean cotton rags, ashes from chicken feathers and oil with sugar or 'yerba mate' (*Ilex paraguariensis*) powder. In some cases, a cotton cloth is tied around the child until the cord dries out and drops off.

The cord is four fingers long and there you cut it, well you don't really just cut it there, it is a bit more because if the doctor sees it is wrong he can see it and cut it. Three fingers long and there you tie it and cut it. With a strong piece of thread you tie it there, very tightly, and that thread remains stuck to the placenta...because if she [the mother] remains with the placenta inside she can die. (P., Los Molinos)

Special attention is given to the behaviour and appearance of newborn babies. Evil, envy, harm and sorcery are often mentioned as the cause of diseases among newborn babies. This is especially evident when explaining the causes of aesthenia, loss of weight and appetite, insanity or other symptoms such as irritability, nervous anxiety and insomnia. These signs are diagnosed as an ailment known as 'ojeadura' or 'mal de ojo', in other words 'evil eye'. According to the peasants, this ailment reflects the fact that some people can cause harm by the way they look at others, whether on purpose (by praise, envy or greed) or not (a relative or neighbour that stares at a weak person after a long, hard-working or troublesome day). 'Evil eye' often affects children, particularly newborn babies, who are weaker than adults, who become ill when exposed to a more powerful energy. 'Evil eye' is a folk disease that is also found in other regions of



Argentina (Di Lullo, 1944; García and Jiménez, 1986; Arenas and Galafassi, 1994; Idoyaga Molina, 1999a, 2001, Disderi, 2001), and is deeply rooted in Hispanic–European traditions (Kuschik, 1995; Pieroni, 2002). The diagnosis and treatment for this ailment is reserved for specialists and generally does not require the use of plants. It is cured using a practice similar to those described for other areas of America and Europe, which involve a plate with water into which some drops of oil are poured down a spoon. These therapies combine prayers and magical incantations together with gestures symbolising the expulsion of the cause of evil, while pointing at the region of the temples. The treatment of these ailments can also include certain plant species that have been attributed magical or powerful properties (e.g. the use of *Ruta chalepensis* for treating amnesia) (Arenas and Galafassi, 1994), or the use of *Portieria microphylla* for treating ‘evil eye’.

### Family planning and abortion

In general, the interviewees denied participating in abortive practices, although this is reasonable as it is a Catholic community. Even though it is probably concealed in the context of the interviews, the limits between the contraceptive, emmenagogue and abortive effects (especially during the early stages) seem to be vague in the experience and practice of peasant medicine, making these differences imprecise and difficult to interpret. On the other hand, the analysis of the ethnomedical information obtained in this study reveals accurate recollection of a considerable number of contraceptive and abortive plants. The plants that are commonly used for this purpose are *Ruta chalepensis*, *Anemia tomentosa* var. *tomentosa* and *Margyricarpus pinnatus* (Table 1).

Despite the availability of contraceptives, such as preservatives, contraceptive pills and intrauterine devices (IUDs) in local health centres and shops, their use is not popular among the peasant community, and each one has a different degree of acceptability. The frequent rejection of some artificial contraceptive methods, the imprecision of peasants for defining pregnancy associated with ethno physiological descriptions that differ from those of biomedicine, and the detailed records of some emmenagogue and abortive plant concoctions, suggests that early abortions caused by the ingestion of herbs is a common practice among female peasants. However, local medical agents are rarely consulted regarding abortions. In addition, local dispensaries have highlighted the in-

creasing interest of women in oral contraceptives and the difficulties of implementing IUDs. Nurses have reported that, in some cases, the women themselves or their husbands manually extract the devices from their uterus. The rejection of this method of contraception is not just a regional phenomenon; similar situations have been reported among peasant and indigenous populations in other areas of Argentina. Idoyaga Molina (1997, 1999b) suggested that the physical and endogenous features of IUDs and other artificial contraceptives are believed to cause illnesses or be potentially hazardous. This belief is based on the concept of substance illness, which is typical of the ontological/exogenous aetiological models described by Laplantine (1999).

### Consequences of traditional knowledge on the health care of peasant women

As indicated by Cosminsky (1978), the interpretation of the norms, prescriptions and maternal–baby care sustained in peasantry representations show that, from a local point of view, childbirth constitutes a biological process and a complex socio cultural process. Even today, when home births and midwifery are only exceptional events, an important group of the population still shares this universe of representations associated with traditional medicine, trusting both the biological and symbolical efficacy of these practices (which is usually unknown in biomedical practice). Gynaecologists and obstetricians should be specially trained to provide peasant patients with greater confidence and support. Occasionally, the decisions taken due to traditional beliefs or resistance towards hospital care is simply interpreted as ignorance by biomedical professionals, without contemplating how different it is for a peasant woman to relate to a gynaecologist or obstetrician instead of a traditional midwife, and this is intensified by differences in language, ways of getting acquainted or gender. This is particularly the case with shyness during the visit, the familiarity of the birth place, and the possibility of being able to intervene in decisions such as the destination of the placenta or the position of the childbirth.

The author concurs with Cosminsky (1978) on the need for detailed analysis of the innocuousness, dangers or benefits of the different traditional customs in order to develop medical pluralism in rural environments; a situation that has still not been put into practice. In fact, this anthropological dimension is not even included in the training of

biomedical professionals in Córdoba. Furthermore, there are no records of traditional midwives accompanying peasants during the trip to the hospital or remaining with them throughout their stay in hospital. In this sense, many innocuous traditional habits and customs could be included as part of the practices carried out in hospitals or health-care centres, or at least be allowed in these institutions. Even when some people point out that taking hot baths postpartum is a possible cause of haemorrhage, the validity of the Hypocratical opposition and the hot–cold categories should be put into practice, especially regarding foods prescribed during the puerperal diet, the environmental surroundings and the care given during this period, which should not be lack of ‘hot’ foods or exposure to ‘cold’ agents.

Certain practices carried out by midwives (i.e. the way the umbilical cord is cut, postpartum treatment of the placenta, ‘rubbings’ or massages, and ‘blowing of the bottle’) are unharmed to the mother, as they are fully aware of the basic norms of asepsis and handle the patients in a delicate and gentle manner. Similarly, many practices related to gestational taboos, as well as the interest in knowing the dates of the menstrual cycle to predict the date of birth, indicate that peasant folk are especially sensitive to the care required during this stage. This should be considered when incorporating new health-care practices, particularly those regarding family planning and contraception.

The use of herbs and medicinal preparations demands greater consideration and precision. In some formulations, it is evident that the symbolic efficacy is at stake, in which case its use would not produce undesired effects (e.g. eating cinnamon and blackberries). Similarly, most external applications present no complications if the midwives are shown the special aseptic care needed for healing the navel. However, more care is required concerning the internal use of some plants, particularly when they are drunk as concoctions. The traditionally popular galactogogues (*Zea mays*, *Morrenia brachistephana*, *Cichorium intybus*) have no contraindications when consumed as foods. On the contrary, the administration of emmenagogue, oxytocic and abortifacient substances poses greater risks, although toxicity has only been proved in some of these species. This calls for further ethno pharmacological and ethno botanical studies to prevent uses of dangerous formulations, and to encourage an appropriate choice of species for maternal–baby health. Ethno pharmacological studies have been undertaken for some native species in Argentina, and there is also a vademecum for authorised useful species (Agnese et al., 2002);

however, no studies confirming the medical value or potential danger of most of the species described for female ailments in this study have been carried out, especially for native species. Similar or identical uses have been described for imported cultured species such as *Ruta chalepensis*, *Tanacetum parthenium*, *Zea mays*, *Petroselinum crispum* and *Artemisia absinthium* in other areas of Argentina as well as in other Latin American populations with Hispano–European influences (Di Stasi et al., 1994; Ososki et al., 2002). Furthermore, toxicological studies undertaken in animals confirm the embryotoxic and uterine- tonic effects of *Ruta chalepensis* (Zeichen de Sa et al., 2000), the abortive effects of the aqueous extract from *Artemisia absinthium* (Rao et al., 1998), and the toxicity of the essential oils from *Petroselinum crispum* and *Lippia turbinata* (Alonso, 1988); the latter being an autochthonous species.

Even though these medicinal species are highly relevant in the traditional care of women, they are still of minor importance in the biomedical context. Even when health professionals profess to be open to certain traditional customs (e.g. the diagnosis of ‘evil eye’, cures for indigestion), they usually object and even refuse to prescribe herbs, based on their general fear towards the unknown. In fact, health professionals have a common lack of familiarity with the identification of these resources, an imperious demand to know the doses of plants in the same way as the doses of drugs, and a great fear of intoxication. This situation will eventually change with the introduction of training courses on the subject. Once health-care professionals become educated, they will be more open to the use of herbs and the incorporation of traditional practices into primary health care.

## Conclusions

The poor consensus of the interviewees on the uses of medicinal plants reveals that this body of knowledge is held by a small group within the population, and also manifests the process of cultural erosion taking place. Despite this, the vast number of species used for maternal–baby health care by midwives and the peasant community emphasises the importance of rekindling this knowledge in a primary health-care context, especially in primitive and inaccessible areas.

The traditional beliefs and practices associated with maternal and baby health care in rural areas show the connivance of principles reformulated from humoral medicine, from analogical reasoning and from vital and functional interpretations of

morbid processes. It is apparent in this region, as well as in the rest of Latin America, that the principle of Hypocritical opposition and the hot-cold categorisation are significant criteria that rule over the practices of both mother and child health care during birth and puerperium. Interestingly, the insistence on the vulnerability of the puerperal woman, the use of warmth and the avoidance of cool agents during this stage are part of the structure of traditional beliefs and practices of populations with highly noticeable cultural differences, as is the case in migrant Hmong women in Australia (Rice et al., 1999; Rice, 2000) and rural Korean women (Sich, 1981). For reproductive health and fertility control, there is an evident contrast between the information provided by the interviewees and by local doctors. This reflects the need to pursue the topic, clarifying the ethno physiological representations of fertility, conception and early stages of pregnancy, and the need to obtain statistical data providing sanitary information that will differentiate the situation of the Criollo women from the rest of the population of the area.

Even when there are no programmes in the area that contemplate the incorporation of traditional doctors and midwives with the regional health-care sphere, the analysis of beliefs and representations gives the local practitioners an understanding that will provide a more strategic access to health care and optimise the sanitary response for pregnant woman and newborn babies in places where traditional medicine is still strongly abided.

## Acknowledgements

Special thanks are due to all the informants who shared their ethnomedicinal knowledge with the author and to the researchers Dr. A.M. Planchuelo, Dr. M. Ojeda and Dr. E. Fuentes (Facultad de Ciencias Agropecuarias, Universidad Nacional de Córdoba) for their directions, advice and help during the work. Thanks are also due to Dr. Pastor Arenas and Dr. Gustavo Scarpa (IBODA, CONICET) for their valuable assistance with ethnobotanical bibliography, training and counselling. The author would like to thank Catriona Kirkwood for helping with the English revision of this paper. To SECYT and CONICET for the fellowships and grants awarded. Thanks are also due to the ONG 'Raíz de Sabiduría' and to Lic. Patricia Villalba.

## Appendix A. Supplementary Materials

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.midw.2006.12.011](https://doi.org/10.1016/j.midw.2006.12.011).

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