Importance Of Milk In Siddha Medical Practice

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Importance Of Milk In Siddha Medical Practice

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Abstract

Siddha, the age old medical science has medicines prepared out of living things. Among them milk and milk products are distinguished one, which plays a role in pharmaceutical formulations and itself as a medicine. There are many varieties of milk from mammals including species have been described for alleviating diseases and disorders through ratio of dilution and choosing the vessels for boiling etc. The characteristics of certain mammal’s milk like cow, goat, donkey, camel and buffalo were analyzed with special reference to Siddha literatures and evidence based scientific data.

Introduction

Milk is a white liquid produced by the mammary glands of mammals. It is the primary source of nutrition for young mammals before they are able to digest other types of food. Early-lactation milk contains colostrum, which carries the mother’s antibodies to the baby and can reduce the risk of many diseases in the baby. In almost all mammals, milk is fed to infants through breastfeeding, either directly or by expressing the milk to be stored and consumed later. Humans are an exception in the world for consuming milk past infancy from other animals. We depend on many animals for milk not merely for nutrition also for their medicinal values in ailing the illness. In Siddha medical practice traditional usage of various milk and milk products are documented thousands of years before and ‘n’ numbers of researches are done nowadays which prove the facts said in age old science.

Milk and milk products in Siddha Medicine

The animal and human’s milk contributed significantly in Siddha medical practice. Milk plays a key role in some of the medicines as ingredients and some in as Anupanam (vehicle). Even milk itself is used as medicine which is said as Tharoshana sikitchai. They are cow’s milk, buffalo’s milk, goat’s milk, elephant’s milk, Horse’s milk, Camel’s milk and Human’s milk. The ancient literature even reveals how to dilute the concentrated milk in a proportionate ratio. The milk and milk products handling in Siddha system are milk, curd, buttermilk, butter, ghee and cheese. The uniqueness stands behinds these products to various illnesses are based on the Pancha bootham (five elements) concepts – earth, water, fire, air, and space) Table.1. There is an interesting method by adding some herbs to any kind of milk which make an equivalent to goat’s milk.

Evidence based scientific data

Goat’s milk

Goat’s milk has characteristics of digestive and metabolic utilization of minerals such as iron, calcium, phosphorus and magnesium. It is used in anemia (iron deficiency) and bone demineralization (softening of the bones). A pharmacological study says that Due to the higher bioavailability of iron, calcium, phosphorus and magnesium, the restoration of altered hematological parameters and the better levels of parathyroid hormone (PTH), a hormone that regulates the calcium balance in the organism was found in the rats that consumed this food. In addition, and unlike observations in cow milk, its calcium enrichment does not interfere in the bioavailability of the minerals studied. The protein from goat milk can be suitable as a protein source for infant and follow-on formulae provided the final product complies with the compositional criteria as approved in EC.

Donkey’s milk

An analytical study on donkey milk protein profile demonstrated that human and donkey milk contain considerable amounts of lysozyme, lactoferrin and lactoperoxidase, confirming the high similarity between donkey and human milk. Thus the donkey milk is used to feed children affected by Cow Milk Protein Allergy (CMPA).

A preliminary study results show that donkey milk contains many antimicrobial components further than lysozyme. These components might play an important role in the improvement of the host defense system of newborn and small infants which either cannot be nourished by human milk or are allergic to other milks.

Camel’s milk

A study shows that it is having anti diabetic activity in streptozotocin induced diabetic rats. Another study
reveals that camel milk contains similar immunoglobulin but ten times smaller to mother’s milk8 which are easily absorbed in intestines and enters the blood stream and reduce children’s allergic reactions. Also in vitro tests have shown that camel milk reduces anti-immunoglobulins in the blood. It is reported that there are many “protective proteins” in camel milk that exert immunologic, bactericidal and viricidal properties. The most prominent of these are lactoferrin, lactoperoxidase, NAGase and PGRP9. A camel variable domain antibody fraction is a potent and selective inhibitor of the hepatitis C enzyme system10.

**Buffalo milk**

An interesting study shows the results that buffalo milk has high percentages of saturated fatty acids, retinol, tocopherol levels and lower percentages of unsaturated fatty acids compared to cow’s milk.11

**Research data comparison with Siddha literatures**

1. Human’s milk composition is more or less equal with donkey’s milk as said in literature.
2. The donkey milk is used to feed children affected by Cow Milk Protein Allergy (CMPA) and it has many antimicrobial activities.
3. Human’s milk is used in eye diseases.
4. It is said that when adding up of water with Buffalo’s milk equal amount of water should be taken in account of diluting the concentrated saturated fatty acids. And also cow’s milk is better preferred rather than buffalo’s milk as a vehicle because of more amount of unsaturated fatty acids and other notable constituents.
5. Goat’s milk is good to consume and it alleviates many clinical conditions like iron deficiency anemia, strengthening bones and to maintain better levels of PTH.
6. Camel’s milk is having anti-diabetic activity.

**Conclusion**

The utilization of milk from various animals as said above can be encouraged not only for nutritive values and also for specific therapeutic properties. More number of literary researches must be discovered to explore in the research platform for healthy society.

**References**

Part of the results of this research has been published in the International Dairy Journal and Journal Dairy Science.

1. Scientific Opinion on the suitability of goat milk protein as a source of protein in infant formulae and in follow-on formulae EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA)2, 3 European Food Safety Authority (EFSA), Parma, Italy EFSA Journal 2012;10(3):2603
2. A Proteomic Study on Donkey Milk
Silvia Vincenzetti1*, Adolfo Amici2, Stefania Pucciarelli2, Alberto Vita2, Daniela Micozzi3, Francesco M Carpi3, Valeria Polzonetti3, Paolo Natalini3 and Paolo Polidori4

Biochemistry & Analytical Biochemistry Vincenzetti et al., Biochem Anal Biochem 2012, 1:2
http://dx.doi.org/10.4172/2161-1009.1000109

1. Isolation of Components with Antimicrobial Property from the Donkey Milk: A Preliminary Study Filomena Nazzaro*,1, Pierangelo Orlando2, Florinda Fratianni1 and Raffaele Coppola1 The Open Food Science Journal, 2010, 4, 43-47

2. Effect of camel milk on collagen abnormalities in streptozotocin-diabetic rats
Available online http://www.academicjournals.org/ajpp

4. Investigations on the Nutritional and Functional
Value of the Buffalo Milk Marian MIHAIU1), Adela PINTEA1), Constantin BELE1), Alexandra LAPUSAN1), Romolica MIHAIU2), Sorin Daniel DAN1), Carmen TAULESCU1), Ana CIUPA1). Bulletin UASVM, Veterinary Medicine 67(2)/2010 ISSN 1843-5270; Electronic ISSN 1843-5378.
Illustrations

Illustration 1

Table 1

<table>
<thead>
<tr>
<th>No.</th>
<th>Milk products</th>
<th>Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Milk</td>
<td>Space</td>
</tr>
<tr>
<td>2</td>
<td>Cream</td>
<td>Air</td>
</tr>
<tr>
<td>3</td>
<td>Buttermilk</td>
<td>Water</td>
</tr>
<tr>
<td>4</td>
<td>Butter</td>
<td>Earth</td>
</tr>
<tr>
<td>5</td>
<td>Cheese</td>
<td>Fire</td>
</tr>
</tbody>
</table>

Table 1
Reviews

Review 1

**Review Title:** A Simple Study Nevertheless an Useful One

Posted by Prof. Gowrishankar Ramadurai on 15 Nov 2012 05:53:43 AM GMT

**What are the main claims of the paper and how important are they?:**
The article highlights the importance of milk and its medicinal properties

The claim is not novel, however it brings forth the importance of the subject

Yes

Yes

**If a protocol is provided, for example for a randomized controlled trial, are there any important deviations from it? If so, have the authors explained adequately why the deviations occurred?**

Not applicable

Yes

Much more detailed study could be performed to enhance the knowledge and input.

Much more detailed study could be performed to enhance the knowledge and input.

**Rating:** 5

**Comment:**
The authors have done a fairly good job in bringing to light the importance of Milk and its medicinal properties. However, scientifically much more studies need to be conducted to clearly establish the results.

**Competing interests:** No

**Invited by the author to make a review on this article?** : No

**Have you previously published on this or a similar topic?**: No

**References:**

**Experience and credentials in the specific area of science:**

Nil

**How to cite:** Ramadurai G.A Simple Study Nevertheless an Useful One[Review of the article 'Importance Of Milk In Siddha Medical Practice ' by ].WebmedCentral 1970;3(11):WMCRW002332
Review 2

Review Title: Importance of Milk in Siddha Medical Practice

Posted by Dr. Sasi S.K on 22 Oct 2012 12:44:46 PM GMT

What are the main claims of the paper and how important are they?:
The paper emphasizes the medicinal uses of milk obtained from various animal sources and their comparision with recent scientific observations.

Yes. A new effort to establish the literary evidences.

Yes

Yes

If a protocol is provided, for example for a randomized controlled trial, are there any important deviations from it? If so, have the authors explained adequately why the deviations occurred?
This is a review paper no protocol available

This is a review paper no methodology available

This paper would be more valuable, if supported with clinical trial.

This paper would be more valuable, if supported with clinical trial.

Rating: 6

Comment:
It is a good attempt made by the authors to validate the literary evidences found in ancient siddha text. It would be more appealing if the medicinal properties are proved using a elaborate clinical trials.

Competing interests: No

Invited by the author to make a review on this article?: Yes

Have you previously published on this or a similar topic?: No

References:

Experience and credentials in the specific area of science:
More than 20 years of experience in this field of siddha science

How to cite: S.K S. Importance of Milk in Siddha Medical Practice[Review of the article 'Importance Of Milk In Siddha Medical Practice ' by ]. WebmedCentral 1970;3(10):WMCRW002308
Review 3

Review Title: **Importance of Milk in Siddha Medical Practice**

Posted by Dr. Mahendran R on 11 Oct 2012 04:25:20 PM GMT

**What are the main claims of the paper and how important are they?:**
The scientific proof for the Therapeutic uses found in Siddha literature. Scientific proof is very important for any siddha literature.

Claims are ok. Its better to present a paper in a more experimental way.

Yes.

The results of course support the claims.

**If a protocol is provided, for example for a randomized controlled trial, are there any important deviations from it? If so, have the authors explained adequately why the deviations occurred?**

No.

Yes. Yes the paper offer enough details of its methodology.

Statistical inference is required for any of the experiment to be proved.

Statistical inference is required for any of the experiment to be proved.

**Rating:** 5

**Comment:**
No comments

**Competing interests:** No.

**Invited by the author to make a review on this article?** : Yes

**Have you previously published on this or a similar topic?** : No

**Experience and credentials in the specific area of science:**
I am basically a Siddha Physician. And interested in research works regarding the therapeutic measures provided in Siddha literatures.

**How to cite:** Anonymous. Importance of Milk in Siddha Medical Practice[Review of the article 'Importance Of Milk In Siddha Medical Practice ' by ].WebmedCentral 1970;3(10):WMCRW002293
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