



Research Article

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Immune- wellness and Herbal Preparations

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Abstract

Immune boosting cum wellness benefits of five proprietary siddha drugs such as Aforte, Pesin, Bekay, Caratole and Hista Block tablets were studied. All the above drugs increased the population abundance of *Lactobacillus acidophilus*. *In vitro* suggest the possibility of facilitating the probiotic environment in the gut and associated pharmaceutical benefits of probiotics. There is a dip in the population abundance of probiotics is known in several auto immune diseases such as Psoriasis, Vitiligo etc. All the above drug tested were indicated for vitiligo, psoriasis and other auto immune diseases. The new therapeutic benefit of the above drugs along with scientifically proven benefits suggest that these drugs besides having pharmaceutical benefits also may help in auto correction of the system (Tridosha) thereby help to achieve wellness as well besides treatment. This is the first finding on the possible mechanism action of siddha drugs in achieving wellness and details are presented in the paper.

Keywords: Immune boosting drugs, Auto immune disease- Probiotics, Siddha (Tridosha).

INTRODUCTION

The siddha drugs besides having repertoire of therapeutic benefits also have effect in augmenting the wellness of human system through certain changes in the microcosm of human system. The concept of kayakalpa is one such example for wellness. How siddha drugs could foment wellness is not fully established. One such possibility is through enhancing the population abundance of pre-biotic or probiotic organism. The wellness benefit due to siddha drugs is quite obvious and loud [1, 2 & 3].

One of the hypotheses is that siddha drugs may balance the humor system (Tridosha) and thereby achieve mind- body equilibrium. There are many other ways also siddha drugs may work to offer wellness [4 & 5].

To explore and unravel the 'mystery science' of siddha system of medicine we have employed a novel strategy in which we have studied the effect of the above drugs using the growth abundance of *Lactobacillus acidophilus in vitro*.

Considering the enormous health and wellness benefit of *Lactobacillus acidophilus*, retaining its population abundance in the gut is essential for achieving wellness and also to aid the treatment of various auto-immune disorders where *Lactobacillus acidophilus* plays a significant role.

The present study report the hidden science of Aforte, Pesin, Bekay, Hista Block and Caratol- e on the growth of *Lactobacillus acidophilus* and its medical importance.

MATERIALS AND METHODS

Details of the drugs tested

AFORTE Tablet

Each tablet contains

- *Withania somnifera* : 200 mg
- *Centella asiatica* : 250 mg
- *Linga chenduram* : 1 mg
- *Excipients* : Q.S

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PESIN Tablet
<p>Each tablet contains</p> <ul style="list-style-type: none"> • <i>Smilax chinensis</i> : 100 mg • <i>Embelia ribes</i> : 100 mg • <i>Withania somnifera</i> : 125 mg • <i>Elettaria cardamomum</i> : 100 mg • <i>Conch turbinella rapa parpam</i> : 50 mg • <i>Linga chenduram</i> : 1 mg • <i>Excipients</i> : Q.S.

BEKAY Tablet
<p>Each tablet contains</p> <p><i>Processed Ferrum- 5%</i> <i>Processed in juices of Eclipta prostrata and Citrus bergamia in equal proportions</i></p>

HISTA BLOCK Tablet
<p>Each tablet contains</p> <ul style="list-style-type: none"> • <i>Phyllanthus emblica</i> : 50 mg • <i>Smilax chinensis</i> : 100 mg • <i>Corallocarpus epigaeus</i> : 75 mg • <i>Clerodendrum inerme</i> : 100 mg • <i>Processed sulphur</i> : 25 mg • <i>Conch turbinella rapaparpam</i> : 25 mg • <i>Linga chenduram</i> : 1 mg • <i>Ponnimillai chenduram</i> : 1 mg • <i>Excipients</i> : Q.S.

CARATOL- E Tablet
<p>Each tablet contains</p> <ul style="list-style-type: none"> • <i>Smilax chinensis</i> : 100 mg • <i>Withania somnifera</i> : 100 mg • <i>Elettaria cardamomum</i> : 10 mg • <i>Psoralea corylifolia</i> : 50 mg • <i>Embelia ribes</i> : 50 mg • <i>Piper longum</i> : 50 mg • <i>Conch turbinella rapa parpam</i> : 50 mg • <i>Linga chenduram</i> : 1 mg • <i>Ponnimillai chenduram</i> : 1 mg • <i>Excipients</i> : Q.S

Methodology

The pure culture of *Lactobacillus acidophilus* was used for the present study. The organism was grown in Lactobacillus MRS medium and its growth curve was plotted.

1% aqueous extract of all the above drugs were prepared separately and was incorporated into Lactobacillus MRS media at 1% level. *Lactobacillus acidophilus* was inoculated on to the drug incorporated plates in duplicate and was incubated at ambient temperature. The number of colony forming unit of *Lactobacillus acidophilus* was counted on daily basis for 15 days. The number of colony forming units of *Lactobacillus acidophilus* on day 5, 10 & 15 were counted in all the duplicate plate and average was taken. The average differential growth of the organism in drug treated plates was compared with untreated Lactobacillus MRS

plate. The percentage increase in the growth of *Lactobacillus acidophilus* was calculated.

RESULTS

The growth of *Lactobacillus acidophilus* was almost constant in drug untreated plate with an incremental increase of 8% on day 10 over day 5 and 18% on day 15 over day 10. Table- 1

All the Siddha drugs tested such as Aforte, Bekay, Caratol-e, Hista Block and Pesin showed remarkable effect on the growth of *Lactobacillus acidophilus* from day 5 to day 15. The number of colony forming units of *Lactobacillus acidophilus* in drug treated plates were several fold higher than the control plate. Table- 1

Table 1: Effect of herbal drugs on the growth of *Lactobacillus acidophilus*

Test drugs	Increase in the load in CFU on day 5	% increase	Increase in the load in CFU on day 10	% increase	Increase in the load in CFU on day 15	% increase
Aforte	379	51.6	450	66.7	620	96.8
Bekay	480	92	580	114.8	700	122.2
Caratol e	484	93.6	590	118.5	805	155.6
Hista Block	423	69.2	600	122.2	800	154.0
Pesin	370	48	500	85.2	655	107.9
Untreated Control	250	-	270 (8%)		315 (18%)	-

DISCUSSION

The present study has revealed an interesting finding which is not only unknown but also not thought of and explored till date. All the siddha drugs tested such as Aforte, Bekay, Caratol-e, Hista Block and Pesin showed remarkable effect on the growth of *Lactobacillus acidophilus*. How various herbal constituents supplement and support increased growth of *Lactobacillus acidophilus* is quite mind boggling. Another interesting aspect was the growth characteristics of *Lactobacillus acidophilus* in drug treated plates. The growth of the organism in drug treated plates in comparison with control plates were large conspicuous and obvious. However the microscopic characteristic did not show any great difference between drug treated and control. This suggests that number of individual cells in each colony were quite large in drug treated when compared to control.

All the above drugs are given to various auto- immune disorders such as vitiligo, psoriasis and for the purpose of immune boosting. The clinical outcome after use of this drug over the decades of experience clearly show that all this drugs are significantly altering the immune impairment as reflected by the positive outcome at patient level.

During inflammatory stage of psoriasis and during progressive erosion of pigmentation in vitiligo the drug such as Pesin, aforte and Caratol- e have shown dramatic change in the pathological condition. Intense laboratory studies on keratinocytes and melanocytes have clearly shown

that these drugs got significant effect at cellular level to bring a clinical change in vitiligo and psoriasis. However the new ramification of these drugs affecting the growth abundance of *Lactobacillus acidophilus* is quite unknown. The bonanza of benefit as revealed by the present study along with the known mechanism of action of these drugs either on keratinocytes or melanocytes clearly explains why and how these drugs have occupied an exalted position in the treatment psoriasis and vitiligo and other auto immune diseases.

Lactobacillus acidophilus is an important gut commensal flora plays a significant role in the treatment of several diseases including psoriasis and vitiligo [6,7 & 8]. Therefore maintaining its growth abundance in continuum in gut is the primary precursor for better prognosis.

The present study has shown that all the above drugs tested have target specific growth up-regulating effect on *Lactobacillus acidophilus*. We don't know whether these drugs do positively influence the growth dynamics of other probiotics in the gut. Whether these drug act like pre-biotic or as supplement to probiotic yet to be decoded. However the role on *Lactobacillus acidophilus* is indisputable.

Most of the siddha drugs are known to have wide variety of therapeutic effects. It means a single drug may have variety of treatment benefits such as reducing fever, body pain, increase in appetite and digestion, boosting immunity and correcting tridosha imbalance. Therefore most of the siddha drugs besides treating and curing the disease also offer

much needed wellness benefit and mind- body balance. How the wellness and mind- body balance is achieved by siddha drugs is quite intriguing.

CONCLUSION

Our present study postulates that by increasing the growth abundance of probiotics the siddha drugs may be offering the wellness benefit. Once the growth of probiotics are kindled positively the probiotics may do the rest of treatment thereby ensure wellness and mind-body balance. In most of auto immune diseases including vitiligo and psoriasis alteration and abrogation of probiotic ecosystem is proven. Therefore correcting the probiotic ecosystem is also needed for achieving treatment success of psoriasis and vitiligo.

Conflicts of interest: The authors declare that there is no conflict of interest.

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