

PRAKARADI YOGAS: 'THE TRADITIONAL IMMUNOMODULATORS'

ABSTRACT

It's a well-known fact that Prevention is better than cure. As children are the basic building block of future generation Its the need of situation and mandatory for all to take care of their health in this current pandemic situation. Childhood is considered as the most susceptible age for infection. So following the proper safety measures during pandemic *Arogya* can also be achieved by good physical and mental health with the use of different(Ayurveda formulations well explained about *Prakaradi yogas* in *Arogya raksha kalpa Druma* one of the classical Ayurveda paediatric book for children .*Prakaradi yogas* aims at achieving basis of life immunity through various herbal formulations. Immunomodulators are the herbal drugs that augment or improve the immune response and immunity is always a prime concern in childhood. In *Arogya Raksha Kalpadrum* it's been explained well that herbal formulations can enhance immunity when taken accordingly from birth up to attainment of 12 years of age. Use of Immuno-modulatory measures starting from *Jatamatravastha* up to 12 years of age can fulfill the desired health and longevity. Tackles the expected *dosha vaishmya*, and stabilizes *Agni* when taken at right time.This article highlights the role of different *Prakaradi* Yoga in children for healthy growth and development of child to improve the longevity and quality of life.

Keywords- *Arogyaraksha kalpa druma* , *Prakaradi yoga*, Immunomodulators Immunity, *Agni*. pandemic situation.

INTRODUCTION- Immunity is a defense mechanism of our body that gives protection against invasion of any infection or allergens which causes disease. Immunity is of two types(1).Innate Immunity –or genetically transferred immunity,by birth without depending on previous contact with the microbes or infections. (2). Acquired immunity is that when an individual develops immunity as a result of infection or by specific immunization (vaccine) or by lifestyle, exposure,food. According to Ayurveda Immunity is understood as *vyadhikshamatwa* which is ability of the body to weaken the strength of disease and hence prevention of the body from falling ill this is why it is important to have a good immunity, Now a days due to various changes in dietary habits and life style the immunity is getting weaker day by day and the incidence rate of becoming ill is on alarming rate.

In this current pandemic situation prevention is better than cure proves well about the importance of being healthy and fit

CONCEPT OF IMMUNITY IN AYURVRDA-Ayurveda says '*Swasthasya swasthaya rakshanam, Aturasya vikara prashmanam*'. Main goal of Ayurveda is prevention of disease and maintaining the health of a person, second goal is based on the treatment aspect of diseased person. Prevention of disease is directly related to the immune system of the body,or we can say the *Vyadhi Kshamatwa Bala* that itself explains that the power or resistance buildup against *vyadhi*.so we can correlate directly that the Immunity and the longevity can be directly proportional to each other. As compared to the elders children are more prone to infections or disease if they are not taken care properly .According to Acharyas various classification of age is mentioned in our classical samhitas like A/C to *acharya Charak* age up to 16 years is considered as *Balyawastha* .A/C to *Acharya Sushruta* age classification is clearly mentioned as (1) first year of life(0-1)=*ksheerapa* ,(2) 1-2 years of life=*Ksheerannada*(3) 2-16years of age =*Annada*.,A/C to *Vagbhata Acharya* age up to 12 years is considered as *balawastha*.Now as per our topic is concerned about the attainment of longevity which can be achieved by strong immunity and body and mind so *Balawastha* is the main building block to achieve the goal .so for that our acharyas has mentioned so many ayurvedic formulations to to be taken with various *anupanas* and on certain time and *ritu* to enhance the effect of *aushadha*.

CONCEPT OF AGNI -as mentioned in classics earlier," **ROGA SARVE API MANDE AGNOU**" *Agni* (digestive). fire plays an important role in preventing disease, is the root cause of all the disease. *Agni* when vitiated by *vata dosha* causes,*vishama*(unstable),*Teekshna*(aggravated),when vitiated by *Pitta dosha*,and *Manda*(mild),when vitiated by *kapha dosha*. It is important to balance the normal state of *agni* for healthy body by following *Dincharyas*,*Ritucharyas*,and timely *shodhana* .

CONCEPT OF OJAS-It is combined essence of all the *sapta dhatus* and as important as *agni*,its *abhava*(absence)causes depletion of health .*oja* quality is determined by quality of *Ahara*(food)ingested, strength of *agni*, and mental health. Quality of *ojas* is affected by *kshaya*,emotional disturbances,Over thinking,over exertion and fasting.

CONCEPT OF BALA-*Bala* is power of body to fight against the diseases,which is the end product of *ojas*. "**BALADHISTHANAM AROGYAM**" Three types of *bala* mentioned,*SAHAJ*(innate immunity),*KALAJ*(immunity acquires as the age advances achieved due to seasonal and day variations),*YUKTIKRITA*(achieved due to *ahara* and *aushadha sewan*).

In the same way *Arogya Raksha Kalpa Druma* is a widely accepted kerela's traditional ayurvedic pediatric care,a classical text book also aims at achieving the same goal by taking care of the the base that is the phase in which various traditional ayurvedic formulaions are used right from the beginning of birth up to 12 years of age.For achieving disease free body this book has mentioned various *PRAKARADI-YOGAS*(Immunomodulatory-measures.)that are mentioned to be given specifically at starting phase of each growing month. according to this book due to vitiation of *doshas* many diseases are occurring to children very easily due to so many possible reasons so to reduce this prevalence rate of susceptibility towards the disease these *prakaradi yogas* are given.although so many regimens are taken by the mother at the time of gestation along with the lifestyle & dietary management and with the immunization as per government.but after the birth along with the passive

or acquired immunity that is vaccinations. If we can practice these *prakaradi yogas* the chances of getting ill would be reduced which hence provide the longevity to the child.

Comment [MOU1]: If

Table 1: FOR A NEW BORN CHILD-the drug *VACHA* is grinded in the juice of *Tripadika*, three drops of this preparation of juice is to be instilled over the anterior fontanelle of baby from the first day of birth up to 7 days, by doing this procedure digestive power is maintained correctly, *doshas* will be balanced and also protection from the *balagrahas* will be achieved.

Comment [MOU2]: Vacha

Age group	Drug formulation	Mode of administration	anupan	duration	Time	Effect
Newborn(<i>Jatamatra</i>)	<i>Vacha</i> mixed with <i>Tripadika</i> <i>Rasa</i>	<i>Sinchan</i> on <i>murdhani</i>	-	7days	morning	<i>Dosha samayata</i> & <i>agni vriddhi</i>

Comment [MOU3]: Write the botanical name/s

Comment [MOU4]: B name

Comment [MOU5]: Explain what is rasa

Table 2 15 DAYS OLD CHILD-After the fifteenth day of birth *panchanga* of *Bilva* are collected and powdered well and then mixed with juice of *Dhari* and this preparation is to be given internally for 7 days in the morning to prevent occurrence of disease.

Comment [MOU6]: Mention what panca gavya are

Comment [MOU7]: B N- Write the botanical name at least in one place

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Age group	Drug formulation	Mode of administration	anupan	duration	time	Effect
Completed 15 days	<i>Bilva panchanga swaras</i>	oral	<i>dhatri swaras</i>	7 days	morning	Preventive aspect

Table 3 1 MONTH OLD CHILD-after one month drugs as mentioned *HINGU, MUSTA, VIDANGA* are powdered well and added with *ghita* medicated with juice of *TRAYANTI* and it is to be given internally in the morning for 7 days.

Comment [MOU11]: Follow the same writing patter above the tables and write the B N

Age group	Drug formulation	Mode of administration	anupan	duration	Time	Effect
Completed 1 Month	(<i>Musta, hingu, vidanga</i>) <i>churna</i>	oral	<i>Trayanti sarpi</i>	7 days	morning	Disease prevention

Comment [MOU13]: ??

Comment [MOU14]: ??

Comment [MOU12]: Write powder within (...)

Table 4 3 MONTH OLD CHILD-After three months drugs like *VYOSHA* ad powder of *SARIVA* is added with butter and advised to give internally for 7 days.

Comment [MOU15]: Correct as above

Age group	Drug formulation	Mode of administration	anupana	Duration	time	Effect
Completed 3 month	<i>Vyosha</i> & <i>sariva</i> <i>churna</i>	oral	<i>Navaneeta</i>	7 days	morning	Disease prevention

Comment [MOU17]: ???????

Comment [MOU16]: ???????

Table 5: 6 MONTH OLD CHILD-After 6 months the baby is given power of *MUSLIKANDA* and *TRIKATU* (*Pippali+maricha+shunthi*). mixed together well and added with honey and is given internally for 7 days in the morning to prevent disease.

Comment [MOU18]: ????

Age group	Drug formulation	Mode of administration	anupana	duration	time	Effect
Completed 6 month	<i>Muslikanda</i> & <i>trikatu</i> <i>churna</i>	oral	<i>madhu</i>	7days	morning	Disease prevention

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Table 6: 1 YEAR OLD CHILD- here the distribution of formulations are given in a month wise manner for first seven days of every consecutive month .

Age group	Drug formulation	Mode of administration	anupan	duration	time	Effect
1 year 1 month	<i>Dhatri, musta, vyosha</i> <i>churna</i>	oral	<i>Madhu</i> (<i>Honey</i>)	7days	morning	<i>Swasthya</i>
1 year & 2 month	<i>Dhatri, musta, vyosha</i> <i>churna</i>	oral	<i>Navneet</i> (<i>butter</i>)	7 days	morning	<i>Swasthya</i>
1 year & 3 month	<i>Dhatri, musta, vyosha</i> <i>churna</i>	oral	<i>Lukewarm water</i>	7days	Morning	<i>Swasthya</i>
1 year & 4 month	<i>Dhatri, musta, vyosha</i> <i>churna</i>	Oral	<i>Madhu</i> (<i>honey</i>)	7days	morning	<i>Swasthya</i>
1 year & 5 month	<i>Dhatri, musta, vyosha panchakola</i> <i>churna</i>	oral	<i>ghee</i>	7days	morning	<i>Swasthya</i>
1 year & 6 month	<i>Jiraka, pippali</i> <i>churna</i>	oral	<i>Madhu</i> (<i>honey</i>)	7days	morning	<i>swasthya</i>

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1 year & 7 month	Dadima,vyosha	oral	Dadhimastu	7days	morning	Swasthya
1year &8month	Ghee medicated with granthikamoola&kalinga	oral	Warm water	7days	morning	Swasthya
1year &9month	Vella and Krishna(pippali)	oral	Madhu(honey)	7days	morning	Swasthya
1year &10month	Jiraka and vyosha	oral	sugar	7days	morning	Swasthya
1year 11month	Jiraka and vyosha	oral	Cow milk	7days	morning	Swasthya
1year 12month (2year)	Jirakaand&sharkara	oral	Cow milk	7days	morning	Swasthya

Comment [MOU28]: Do the corrections accordingly

Comment [MOU29]: Cow milk

Table 7: 3 YEAR OLD CHILD.

Age group	Drug form	Mode Of administration	Anupana	Duration	time	Effects
3year 1month	Guduchi,pippali,vacha churna	oral	Ghee&sharkara	7days	morning	Swasthya
3year 2month	Vyosha,yasti,vacha,saindhava,vacha,abhaya, churna	oral	Ghee&sharkara	7days	Morning	Swasthya
3year 3month	Vella,musta,ela,vacha,nagar,pippali churna	oral	Ghee&sharkara	7days	Morning	Swasthya
3year 4month	Sariva,vyosha,vacha,jirak,kaiseki churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 5month	Dadima,ambhod,vachadhanyak,magadhi churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 6month	(Vrischiva,bhunimba,vacha,ksheer taru twaka)churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 7 month	(Supyaparni,Aabda,vira,rudhi,chapla,vacha) churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 8month	(Dronapushpa ,abda ,vacha,dwijataru twak) churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 9month	(trayamana,abda,vacha,kutaj,magadhi)	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 10month	(Maltipushpa,vacha,jirak,kaiseki)churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 11month	(samipatra,chitrak,jirak,vacha,pippali)churna	Oral	Ghee&sharkara	7days	Morning	Swasthya
3year 12month completed 4year	(vella,talishapatra,chitrak,pasugandha ,abhaya,vacha)	Oral	Ghee&sharkara	7days	Morning	Swasthya

Comment [MOU30]: Follow one method to write

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5-YEAR OLD CHILD-For the five year old child all the above three year old child month wise regimen are to be followed.

6 YEAR OLD CHILD-six year old child is given with the drugs said for TRAI BDA,

added with roots of SANKHA PUSHPI as a substitute of VACHA and the anupana for this formation is ghee and honey in unequal quantity but instead of the drug VACHA here the drug used will be the PUSHKARAMULA. Anupana and days will be same as mentioned in above year.

Comment [MOU33]:

Table 8: 10 YEAR OLD CHILD-

AGE	Ghrita prepared from	Mode of administration	anupana	duration	Effects
10year 1month	<i>Bramhi juice&kalka of abhaya,vyosha,saindhava,vacha,talishpatra</i>	oral	-	7days	Disease prevention
10year 2month	<i>Krishna munda juice&kalkaofvidanga,amalaka, Patha,dadima,dipyaka)</i>	oral	-	7days	Disease prevention
10year 3month	<i>juice of vetasamla&kalka of jirak,vyosha, saindhava,vacha,jalad,pushkar)</i>	oral	-	7days	Disease prevention
10year 4month	<i>(Jivaniya gana,Ambodha,Jayanti moola ,chitrak and granthi.with Aja dugdha)</i>	oral	-	7days	Disease prevention
10year 5thmonth	<i>(draksha,vruschiva,patha,abda,hapusha moola ,katphala,dadima,with Aja dugdha.</i>	oral	-	7days	Disease prevention.
10year 6thmonth	<i>(Sariva,jalad,ushira,tripkatu,surahwaya,jeerak with aja dugdha)</i>	oral	-	7days	Disease prevention.
10year 7 th month	<i>Kalka of (nagar,amalak,anant,vidanga ,indrayava,ambuda,bilva panchanga.)</i>	oral	water	7days	Disease prevention.
10year 8th month	<i>Kalka of (pippali,indrayava,draksha,bruhati, amshumatidwaya,guduchi,ambu,nalada,alarka, chitrak,dadima,ambhoda,patha,ugra,sigru,hingu, punarnava,bilva moola,sami valka ,malti moolak,utpal,vidanga,amlaka)</i>	oral	Mastu+Jirak +sugar	7days	Disease prevention.
10Year 9month	<i>Decoction of bilva,ajmoda,nirgundi,chapla moola ,toyada,dadima with kalka of vyosha ela chitrak,vidanga)</i>	oral	Cow milk	7days	Disease prevention.
10year 10month	<i>Decoction of trayamana,kalinga,abda,chapla moola ,with kalka of ativisha,musta,bhunimba,kutaj)</i>	oral	Cow milk	7days	Disease prevention.
10year 11month	<i>Kalka of dadima,triphala,vella,magadhi moola,chitrak</i>	oral	<i>Mastu and jivanti juice</i>	7days	Disease prevention.
10year 12month (completed 11 year)	<i>(patha,kutaj,bhunimba,varshabhu,dhanyak, kalka withvella palasha twak,Nisha dwaya, punarnava,vyosha,dipyaka,Ananta,madhuka)</i>	oral	-honey	7days	Disease prevention.

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UNDER PEER REVIEW

12 YEAR OLD CHILD-ON FIRST MONTH OF 12 YEAR OF AGE-Drugs such as ANANTA and VACHA along with sugar and Honey is given for seven days in the morning .

From 2nd Month Onwards- instead, of ANANTA, drugs (BRAMHI, MUNDA, SAMI, VALKA, BHRUNGA, AMALAKA, MAGADHI, VISHALA, VAJRA-VALLI, INDU REKHHA, BHUNIMBA, GOPICA) are to be given onwards up to twelfth month for seven days.

Comment [MOU35]:

DISCUSSION-

Prevention is better than cure. Its obvious from the above facts that the *prakaradi yogas* plays an important role in disease prevention by developing immunity as many formulations mentioned in it have the *rasayana* property and *sroto shodhana* properties that helps in the formation of the superior qualities of *dhatu*s and proper assimilation of nutrients for the growth and development of the child. As per our basic *ayurvedic* principles, pharmacological action of drug is determined by its *RASA* (taste), *GUNA* (properties), *VIRYA* (potency), *VIPAK* (Bio-transformation) And *PRABHAVA* (Specific action). Most of the drugs used in *prakaradi yoga* comprises are of predominantly having *katu-Tikta* (PUNGENT AND BITTER) *rasa*, *katu vipaka* and *laghu guna* (easily digestible), all the properties helps alleviating *kapha dosha* and also provides better metabolism due to its *dipana* and *pachana karma*. There are many pharmacological studies have been done on drugs like *pippali*, *sariva*, *musali* etc are proven to have immunomodulatory actions, some of the ingredients are having actions like *krimighna* (anti-microbial, anti-helminthic), *Jwarghna* (antipyretic), *Hridya* (cardioprotective) *Rruchya* (taste-stimulant), *Anulomaka* (laxative), *Vishaghna* (anti-toxic), antioxidants etc. when these *yogas* are given in different age group with specified duration helps in improving wellbeing of child by providing good metabolism, growth and development with a balanced *agni*.

CONCLUSION-Current scenario, where virus has almost affected all age group inspite of severity is seen more in immune compromised and comorbid people and so children may be equally suspected to be next third wave target so as per of we can promote *prakaradi yogas* as compulsive basic startup as important as vaccination to avoid as much as possible risk of infection, most of the drugs used in *prakaradi yogas* works on Central Nervous System like *vacha* which is *rakshoghna*, behaviour modifying, anticonvulsions, memory enhancer, also helps in *vaak shuddhi* and commonly used in pediatric practice.

Hence it can be concluded that *Arogya Raksha kalpa druma* explaining about *prakaradi yoga* as an immunomodulatory measure can be very fruitful to our future generation when given as per age and schedule by preventing them from source of infections and by reducing the risk of illness that hampers the healthy growth and development of a child. however the many ingredients on these formulation have proven research data on them but further more researches should be promoted among the researchers to prove the efficacy and safety of these *yogas* for the huge acceptance and lime light of the traditional practices.

NOTE:

The study highlights the efficacy of "yoga" which is an ancient tradition, used in some parts of India. This ancient concept should be carefully evaluated in the light of modern medical science and can be utilized partially if found suitable.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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Comment [MOU36]: follow the journal guidelines to correct the reference list