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CASE REPORT

THERAPEUTIC POTENTIAL OF PIPPALI AS VAMANOPAGA AND RASAYANA IN THE MANAGEMENT OF TAMAKA SWASA: A CASE REPORT

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Abstract

Tamaka Swasa, commonly referred to as bronchial asthma, is a chronic respiratory condition characterized by recurrent episodes of breathlessness, wheezing, and chest tightness. In *Ayurveda,* it is classified as a *Swasa Roga* and primarily involves the vitiation of *Vata* and *Kapha* doshas. The condition is often triggered by internal imbalances of dosas and external stimuli such as allergens, seasonal changes, and stress. *Ayurvedic* management focuses on addressing the root cause through a holistic approach that include medicines, dietary modifications and lifestyle changes. *Pippali (Piper longum)* which *is kapha vata samana* and a *rasayana* has mucolytic and bronchodilator properties. It is also agni deepana and has anti-inflammatory property. *Panchakarma* procedures such as *Vamana and Virechana* help in eliminating the vitiated dosas and reduces the frequency of occurrence. Along with this *Pranayama* enhance respiratory function and mental well-being.

This article is a case report on *Tamaka swasa* where the patient has frequent attack of swasa for the past 6 months post H1N1 infection. Patient tried conventional treatment methodologies which gave the patient temporary relief but the quality of life gradually got highly compromise. To reduce the frequency of exacerbating episodes and impart strength to the respitory organs patient opted *Ayurvedic management*. Here patient was advised with *agnideepana,rukshana,snehapana,swedana,vamana,dhoomapana,virechana and rasayana* modalities of treatment were adopted. The symptoms were assessed using Zeicester cough Questionare and St. George Respiratory Questionare before and after the treatment. This would provide data regarding the changes in symptoms as well as quality of life. After the treatment patient showed significant improvement in the symptoms and quality of life. In addition a focal periosteal lesion which was noted in the previous HRCT was found reduced in the CT taken after the treatment. Removal of *kapha from Vayumarga*, by the application of *Swasaroga chikitsa* principle has been recognized in this case experience.

Introduction

TAMAKA SWASA

Swasa roga with its etiological factors, symptoms and treatment are explained in all *Brhattrayees* of *Ayurveda*. It is often described as a symptom of many other diseases. *Swasa* is considered as *pranavaha srotodusti vikara*[1].There are 5 types *of swasa* explained in *Charaka samhitha.* Among them the most common type is tamaka swasa. According to Acharya Charaka it is a *yapya vyadhi* and Acharya Susrutha it is a *krichrasadhya vyadhi*[2].This points towards the flaring up property of the disease during its favourable conditions and difficulty in its management. The burden of this disease is on the quality of life of an individual. Hence, effective treatment modalities and a healthy lifestyle are very important for managing this disease. *Tamaka swasa* is a *swantantra vyadhi* with its etiology, pathophysiology, symptoms and treatment[3].

CAUSES

The causative factors are *vatala ahara vihara* like *ruksha, vishama asana, anasana, seetapana*, exposure to *rajas, dhuma, marmaghata, abhigata etc, pitta prakopa ahara vihara like usna, teekshna vidahi ahara*, exposure to hot climate *and kaphaja ahara vihara like snigdha madhura, guru ahara, divaswapna ati seta sevana* etc[4].The westernized and modern dietary habits, sedentary work and lifestyle along with more urbanization and pollution of air results in *kaphavridh*i and thereby reducing lung capacity.

PATHOGENISIS

All these *nidanas* vitiate their respective dosas and lead to s*amprapt*i.on exposure to these *nidanas,sanchaya of vata* occurs in *pranavaha srotas* and *kapha* in uras. These sanchita dosas *attain prakopa avastha* when exposed to suitable environment like cold climate or wind, further exposure to dust or allegens etc and results in *prakopa avastha* of dosas *in swasthana*. In *prasara avstha* it results in *agnimandhy*a and formation of ama - *"swasamamasayothita"*. The vitiated dosas travel all over the body and produce kha vaigunya in pranavaha srotas too. *Prakupita vata* gets obstructed by k*apha* and takes *pratiloma gati* and produce symptoms like *peenasa, swasa, ghurgurak*a etc. In the absence of proper treatment remission and relapse of the symptoms occurs whenever exposed to favourable environment. The chronicity leads to *leenatwa of dosha* and reduce the structural and functional integrity of srotas ie *pranavaha srotas.*

PREMONITORY SYMPTOMS

The premonitory symptoms include *anaha, adhmana* due to *pratilomagati* of *vata, baktadwesha, vadanasya vairasya* due to *agnimandhya, parswasula, arati* etc.

SYMPTOMS

Symptoms in general include *swasa, kanta gurguraka, peenasa, anidra, kasa*, feels better on breathing in sitting position, etc.

TREATMENTS

The aim of the treatment is to remove the *kapha from the vayumarga*. Treatments can be divided in to *nidana parivarjana, sodhana and samana*. The selection of treatments depends with the condition of *kapha* obstruction and *rogibala. Nidana parivarjana* where all precipitating and predisposing factors should be strictly prohibited. All sodhana karma can be adopted based on predominant dosa and *rogibala. Samana* therapy has wide range on application in *swasa roga* which is applicable in all cases and all stages. It can be adopted for all patients who are unfit for *sodhana karma.* Use of *brhmana and rasayana* karma reduces the recurrence of the disease for long run and replenish the debilitating *dathus.*

It can be broadly co-related with bronchial asthma.

BRONCHIAL ASTHMA

Bronchial asthma is a chronic inflammatory condition of airways which causes breathing difficulty[5]. It is caused by environmental factors, allergens, genetics, dust etc. It is an episodic disease characterized by symptoms include wheezing, coughing, chest tightness and shortness of breath[6]. It is a very common disease with worldwide prevalence of 5-10%.In India the prevalence is 2.05%[7]. Etiopathogenisis can be based on extrinsic factors like allergy or preceeding family history and intrinsic factors like the disease mostly manifests after a viral upper respiratory tract infection. Contemporary treatments include usage of bronchodilators, corticosteroids and anticholinergics[8].

PATIENT INFORMATION

CASE REPORT:

A 32-year-old female patient complaints of recurrent attack of cough and breathing difficulty since 6 months. She was apparently normal before 6 months. After a journey from Delhi she experienced throat pain and fever associated with body pain. During that time she was not able to swallow even liquid food items. She even had to spit out saliva due to pain and thus consulted an Allopathic hospital. The symptoms were suggestive of H1N1 infection and medicines were started. The symptoms gradually subsided and in a gap of 2 weeks, she developed dry cough which later became productive. She took a few Ayurvedic internal medications but did not find much relief. In 3 weeks the symptoms aggravated, the cough became persistent which altered between dry and productive stages. Gradually she

started to experience breathing difficulty ,nasal block and sleep apnoea. She then consulted in a General Hospital and underwent all relevant examinations including TB and was found negative. She was given internal medications and inhalers from there and got temporary relief. During the course of treatment she had episodes of exacerbation of symptoms on exertion like loud reading. She travelled to Kodaikanal at this time and on exposure to cold climate her symptoms worsened. She developed cough, breathing difficulty and mild chest pain. She took modern medication for this and stopped in 5 days due to increased tiredness. During these days the chest pain was confined to left side anteriorly on the base of her breast. She was given antiviral treatment from another Allopathic Hospital for the same. But the localized chest pain increased day by day and HRCT was taken. She was prescribed with inhalers and got only temporary relief. All the symptoms exacerbated on exposure to cold, dust and on exertions. She intended to take Ayurvedic treatment for better and complete cure and was admitted in the hospital. She is also a known case of chronic iron deficiency anaemia.

HISTORY OF PAST ILLNESS

She was infected with H1N1 6 months back

FAMILY HISTORY

No relevant history running in family

PERSONAL HISTORY

Bowel: regular, formed stool

Appetite: Good

Micturition:5-6 times a day:1-2 times/night

Sleep: Sound

Menstrual History: Regular cycles,Bleeding-6-7 days

GENERAL EXAMINATION

Physical appearance-Normal, tidy

Gait-Normal

Clubbing

Cyanosis — Absent

Icterus

Oedema

Pallor - Present

RESPIRATORY SYSTEM EXAMINATION

Inspection-Shape of chest - NAD

Deformities/Asymmetry - Absent

Palpation- Position of trachea - Normal

Lymph nodes - NAD

Apex beat - NAD

Chest expansion - 4cm

Tactile fremitus - Normal

Percussions - Resonant

Auscultation - Wheezing present in all auscultatory areas

INVESTIGATION

HRCT of thorax: Focal solid periosteal reaction at the anterior aspect of left 5th rib with undisplaced fracture line along the superior aspect.

No abnormality in liver parenchyma

No obvious abnormality detected in mediastinum

NIDANA

Environmental factors: Exposure to cold, dust, wind, smoke, travel

Ahara:I ntake of guru,abishyandi ahara

Vihara: Injury to throat or chest

Excessive physical activity

Other *nidanas: Pandu and jwara*

SAMPRAPTI

According to *Acharya Charaka*: The *vata prakopaka nidana* vitiates *prana vayu* and thereby vitiates *urastha kapha*. The *vitiated kapha* obstructs the *pranavahasrotas* and gives rise to swasa. Vitiated vata dosa with its ruksha, sushka and laghu guna produces *rukshata* and *sankocha to pranavahasrotas.*

Here, Nidanas like exposure to cold, wind, dust, injury to chest and throat etc vitiates vata dosa and intake of guru, abishyandi ahara vitiates *kapha dosa*. Vitiated *kapha* obstructs the path of *pranavay*u and causes *pranavahasrotodusti vyadhi - Swasa*

Sanchaya occurs at *amashaya and prakopa* of dosas, mainly kapha *(kledaka and avalambaka*) and *vata (prana, udana) and dathus like rasa and rakta* are primarily involved. *Dosha dushya sammurchana* occurs in p*ranavahasrotas* mainly which results in the disease. *Chirakaritwa* leads to *doshaleenata and srotovaigunya*.

DIAGNOSTIC ASSESSMENT

Physical examinations

Blood tests

Imaging tests like HRCT

DIFFERENTIAL DIAGNOSIS

Urdhwa swasa-As there were no *urdhwa dristi, vibrantha aksha and moha* it was excluded

Chinna swasa- As there were no *rakta eka lochana, murcha, pralapa or vichetana* it was excluded.

Kshataja kasa-No rakta shteevana or paravata iva kujana

MODERN:

COPD-Progressively worsening morning cough with phlegm absent

Bronchiectasis: No history of chronic airway damage with changes in airway and infection.

ROGANIRNAYA- DIAGNOSIS

Tamaka swasa: As there is exacerbation of symptoms on exposure to dust, cold

Branchial asthma- Symptoms worsen on exposure to allergens, cough, chest tightness present

THERAPEUTIC INTERVENTION

- *Agni deepana*
- *Snehapana*
- *Vamana*
- *Peyadi krama*
- *Samana oushada*
- *Rasayana*

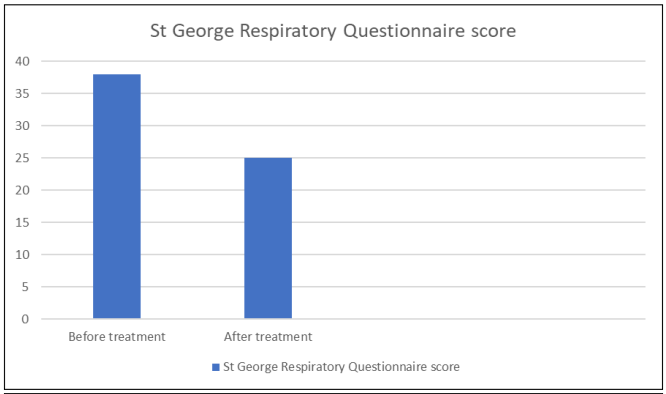
MEDICATIONS

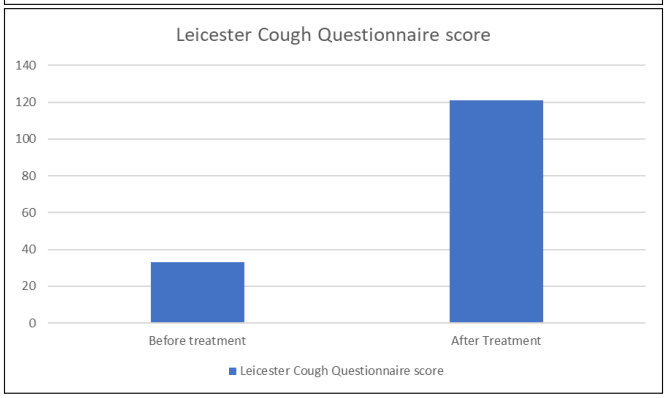
DAYS	NO	NAME OF MEDICINE WITH DOSE AND TIME OF ADMINISTRATION/ KRIYAKRAMA	REMARKS
3	1	*Dasamularistam*,20 ml,3 times a day A/F	Improved agni
	2	*Vaiswanara churnam*,5gm +Hot water,1/2 hour before food	
7	1	*Kashayadhara with Dasamula kashaya*	Lightness of body.
7	1	*Snehapanam with Shadpala ghrtam (50 ml-220 ml)*	All *samyak snigda lakshanas* obtained. Vatanulomana Agnideepti Varcho snigdata GatramardavamAttained Snigdagatrata Snehadwesha Klama
1	1	*Vamanam:* *Poorvakarma: Abhyanga with Satahwadi taila and Swedana was done* *On the day-Abyanga with Sathwadi taila with Saindava on Chest and Nadisweda* was given. *Pippali choornam*-60gm made to a kizhi, dipped and boiled in 2 liters of water reduced to 1 litre 4 liters milk+2 Litre water *Madanaphala:5gm* *Yasti churnam-7.5gm* *Vacha churnam-2.5gm* *Saindhavam-10gm* *Madhu-200ml*	5 *vegas +4 upavegas* obtained 17 glasses of milk with pippali Kashaya was taken *for akandapanam* Wheezing reduced and chest was clear after *vamana*
2	1	*Peyadi karma*	*Agni attained*
7	1	*Dhoomapana with Haridradi varti*	Cough considerably reduced
19	1	*Pippali rasayana(6 gm to 24 gm and back to 6gm)*	Initial days-tiredness was felt and wheezing in the evening When dose was increasing patient felt giddiness at the noon before getting appetite. After getting appetite she was totally fine with no symptoms At the end no cough or wheezing or heaviness of chest was present
		Virechana with Avipati churna with honey (30gm)	Passed bowel 8 times

TREATMENT OUTCOME

The assessments were done using the St. George Respiratory Questionnaire which is used to assess the health conditions and quality of life of patients with respiratory disorders[9].

As the quality of life is highly impaired in respiratory disorders, it is a big challenge in the management of this disease. Hence quality of life is assessed with the Leicester Cough Questionnaire[10].





From the above data it is evident that not only there is considerable relief in the symptoms but also the quality of life highly improved.

DISCHARGE MEDICINE

1. *Agasthyarasayanam*-1 tsp at bedtime.

Practice breathing exercises and Pranayama

DISCUSSION

Bronchial asthma can significantly impact a person's quality of life, affecting physical health, emotional well-being, and daily activities[11]. This chronic respiratory condition, characterized by airway inflammation and bronchoconstriction, can lead to frequent symptoms such as wheezing, shortness of breath, chest tightness and coughing, which can worsen during the night or early morning[12].

Swasa roga is detailed in all *Brhattrayees* of *Ayurveda*. Among them *Tamaka swasa* is considered as a *swatantra vyadhi* with its own causes, symptoms, exacerbating and remitting factors along with its treatment. *Tamaka swasa* is considered as a *yapya vyadhi*. It reoccurs when exposed to aggravating factors and when body has weak immunity. So in Ayurveda rather than supressing the symptoms the root cause is removed by *sodhana karma. Rasayana* karma is very important in *yapya vyadhis* as it improves *vyadhikshamatwa* and thereby reducing the recurrence of the disease. Acharya Charaka lists *Vata and Kapha prakopaka karanas in Tamaka* swasa[13].While explaining the pathogenesis of the disease *Acharya Charaka* explains it as *pittasaya samudbhava vyadhi* and *Acharya Susrutha as amasaya samudbhava vyadhi*[14]. In the development of the condition, imbalanced *Kapha and Pratiloma Vayu* are key factors and airway inflammation arises due to *Saama Vayu* (disturbed body humor), leading to *Shotha* (swelling) and *Srotorodha* (blockage). Thus, patients with *Tamaka Shwasa* should generally be classified into *Vata-dominant and Kapha-dominant* pathogenesis categories. The Aacharya outlined key guiding principles for managing the condition, with a major emphasis on *Nidanaparivarjana*, or the avoidance of causative factors. Various preventive strategies are recommended to help prevent both asthma exacerbations and its onset. The treatment approach primarily involves *Shodhana and Shamana* therapies. For *Shodhana, Vamana and Virechana* are advised, though *Aacharya Sushruta* discourages the use of Sneha Basti.During *utklesavastha, local Snehana with Salavana Taila, Swedana and sadyovamana* are recommended. Charaka has provided specific management principles based on the disease stages, while Shamana therapy includes drugs with properties that alleviate Kapha, reduce Vata, are *Ushna* and promote *Vatanulomana.*

In this case *sodhana* was planned and hence before *snehapana, rookshana and agnideepana* was done. For that *Vaiswanara churna* which contains *lavana, yavani, deepyaka, kana, nagara and hareetaki* was used. All these drugs are agnideepana. Initially *kashayadhara* was done to induce *rukshata and laghutwa* to sareera. For *snehapan shatpala ghrta* was used. Shatpala ghrta is considered as *srotosodhana* and has direct indication in swasa kasa rogas. As this is a kapha *pradhana vyadh*i the medicinine administered should possess usna, teeksha guna to mitigate its sita guru guna. Drugs *like panchakola, yavakshara* in *Shatpala ghrta are usna teeksha and agni deepana*[15]. After attaining *samyak snigdha lakshana, swedana and utklesana ahara* were advised. *Vamana karma* was done with *madanaphala, yasti and vacha. Pippali* boiled in ksheera was given for *akantapana in vamana. Pippali* was selected because it is one among the drugs mentioned in vamanagana and it acts as a decongestant, bronchodilator and expectorant. It is a proven anti-asthmatic drug also. The teekshnata of pippali was balanced as it was prepared and given with *ksheera. Dhoomavarti* was done with *Haridradi varti* for 7 days to remove the residual *kapha after vamana*[16]. It is directly indicated in *swasa roga chikitsa*. After that

Vardhamana Pippali rasayana was done for a period of 19 days *in arohana -avarohana* pattern starting from 3gm and increasing with 3gm on every next day[17]. *Ksheera yavagu* was the pathya diet. The peak doze on tenth day was 30gm. After that from 11th day the dose was reduced by 3gm on every day till it became 3gm on 19th day.

Swasa is a pranavaha sroto dusti roga and amashaya is considered as its *udbhava sthana*. So the r*asayana* should work on both areas to prevent its reccurence. *Pippali is agnideepana, kapha vata hara and swasa kasa hara*. As it is of *madhura vipaka* it will not increase too much pitta with its *teekshna guna*. Hence *pippali* is the best drug of choice for *rasayana*. On discharge patient was advised with *Agastyarasana* which has indications in *swasa-kasa rogas* in order to rejuvenate the *pranavaha srotas* and improve *vyadhikshamatwa* and thereby preventing frequent exacerbations of the disease. Patient was also advised to practise breathing exercises and pranayama to strengthen the respiratory system. Also interestingly a focal periosteal lesion which was present in the previous investigation was reversed with this management.

Conclusion

Tamaka swasa is a very common disease among *pranavaha srotodusta vyadhis*. The difficulty in its treatment is its recurrence on exposure to aggravating factors. The better way to manage it is rather than suppressing the symptoms *sodhana* of root cause followed by *rasayana karma*. *Sthoolasodhana with vamana and sookshmasodhana with pippalirasayana* helps to reduce the frequency of attacks. *Sodhana* according to the site of s*rothorodha* and the application of suitable *rasayana* reducing the symptoms of the patient. Patient was very comfortable and symptom free at the end of treatment. On discharge a medicine that has indications on *swasa kasa roga and has rasayanika* properties was needed and thus was prescribed with *Agastyarasayana*. From the results obtained using the assessment tool it can be concluded that the patient had a reduction in symptoms and quality of life was improved.

PATIENT CONSENT

Written consent regarding the publication of study was taken from the patient.

PATIENT'S PERSPECTIVE

Patient was satisfied with the treatment and there is a subjective improvement in the quality of life of patient.

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IMAGES OF CT THROAX BEFORE AND AFTER TREATMENT

Patient ID	ASH 57158	Patient Name	[redacted] 32Y/F
Sex / Age	Female / 32Yr Y	Report Date/Time	10 Jun 2024
Modality	CT	Originator Id	

PLAIN CT SCAN OF PNS

Coronal and axial plain thin section contiguous scans were taken through the Paranasal Sinuses.

FINDINGS:

Mild mucosal thickening is seen in bilateral maxillary sinus, ethmoid sinus , sphenoid sinus and left frontal sinus with blockage of left side spheno-ethmoidal recess.

No evidence of internal calcification or hemorrhage is seen.

No evidence of bone erosion is seen.

Nasal septum is deviated to right side with bony spur formation.

Right side concha bullosa is noted.

Paradoxical bilateral middle turbinate is seen.

Pneumatization of sphenoid sinus-sellar type.

Osseous margins of sinuses appear normal. No erosions or sclerosis noted.

Both osteo-meatal complexes appear normal.

Right spheno-ethmoid recess appears normal.

Bilateral nasal turbinates appear normal.

Both the orbits appear normal. Bilateral intraocular muscles and retrobulbar fat shows no gross abnormality.

CONCLUSION:

- **Mild mucosal thickening seen in bilateral maxillary sinus, ethmoid sinus , sphenoid sinus and left frontal sinus with blockage of spheno-ethmoidal recess on left side.**
- **No evidence of internal calcification or hemorrhage seen.**
- **No evidence of bone erosion seen.**

Dr. Dishu Shah
MD Radiologist

METRO WITH confidence

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NAME	[redacted]	SCAN.NO	A.20231215/095
AGE	31 yrs	DATE	15-12-2023
SEX	Female	FILMS	

Thanks for referral

HRCT OF THORAX

Serial thin axial multislice sections of thorax were studied from the level of thoracic inlet to the level of liver, isotropic voxel imaging done, study done in 128 slice CT scanner. Coronal MPR images are also given.

The thoracic cavities are bilaterally symmetrical. The lung parenchyma appears normal and no lobar/segmental collapse seen. No thickening noted in any of the interstitial components. No abnormal nodular lesions seen in the airspaces or interstitium. No abnormal areas of increased density or hyperlucency is seen in the lung parenchyma. No parenchymal or fibrotic bands seen. The parenchymal vessels appear normal in pattern and morphology.

The mediastinum is central. *Small volume mediastinal lymph nodes noted in prevascular, pretracheal, AP window, precarinal and subcarinal, largest in the subcarinal measuring 7.4 mm in SAD.* . The great vessels of thorax and heart appear normal in size and morphology.

The trachea, para-tracheal regions and sub-carinal regions appear normal. The main bronchi, tracheo-bronchial regions and broncho-pulmonary regions appear normal. The trachea, main bronchi, and visualized segmental bronchi show normal lumen.

Aorto-pulmonary window and azygo-oesophageal recess are free.

The pleura and pleural space appear normal.

Oesophagus shows no abnormality.

Focal solid periosteal reaction noted at the anterior aspect of left fifth rib with undisplaced fracture line along the superior aspect. No evidence of adjacent soft tissue component.

The rib cage, chest walls and fat planes appears normal.

Visualised portions of liver, spleen and adrenal areas appear normal.

IMPRESSION

- Focal solid periosteal reaction at the anterior aspect of left fifth rib with undisplaced fracture line along the superior aspect. No evidence adjacent soft tissue component.
- HRCT images do not show any abnormality in the lung parenchyma. No obvious abnormality detected in the mediastinum.

DR.HANAN P.DNB
(Consultant Radiologist)

(Note: This modality is having its limitations and the report should be correlated with clinical and other relevant patient data)

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ities available : 3T & 1.5 T MRI Scan, 128 Slice CT Scan, Dexa Scan (Bone Densitometry), Color Doppler Scan, Echo Cardio Mammogram, TMT, PFT, EEG, ECG, EMG, NCV, Complete Laboratory, OPG, Digital X-Ray, 3D/4D Ultrasound

24 Hrs Service

IMAGES

VAMANA