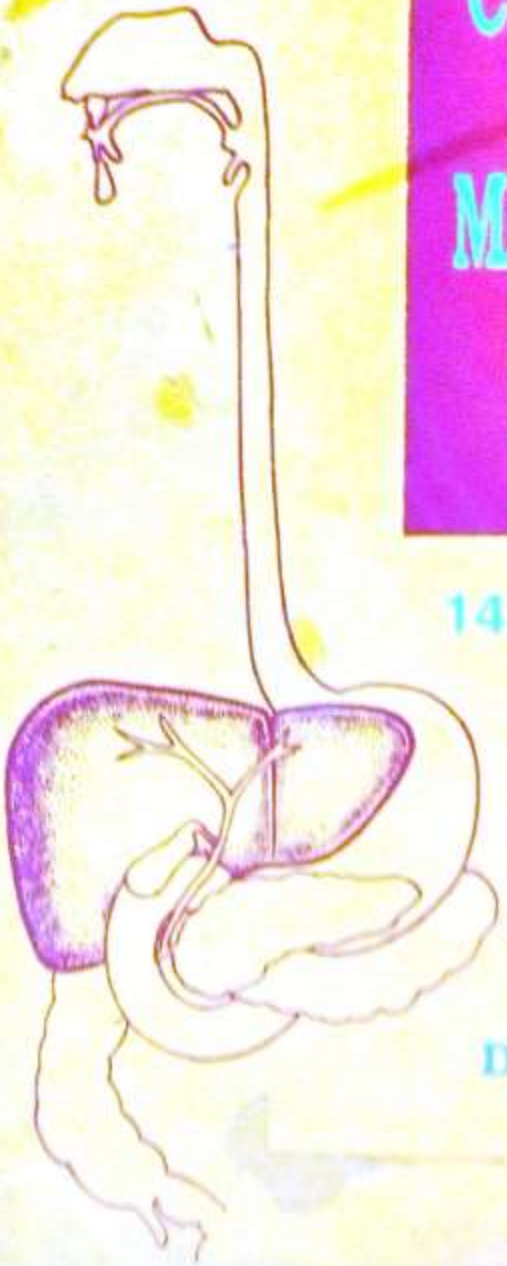
NATIONAL CONVENTION ON MANAGEMENT OF JAUNDICE



14-15 Sept, 1991

Central
Drug Research
Institute
Lucknow

With Best Compliments

From

Regional Medical Centre
Ciba-Geigy, South Asia

Royal Insurance Building
14, J. Tata Road,
Bombay - 400020

NATIONAL CONVENTION ON MANAGEMENT OF JAUNDICE

September 14 - 15, 1991

Central Drug Research Institute,

Lucknow

Organised with CDRI, L.S.P.S.S. & A.Y.S. Lucknow
with grants from CAPART & DST, GOI.

AT A GLANCE

Organising Committee :

Patron	:	Prof. B.N. Dhawan
Chairman	:	Dr. S.R.Naik
Vice-Chairman	:	Prof. C.B. Dubey
Convenor	:	Dr. N.N. Mehrotra
Co-Convenor	:	Vd. R.K. Mishra
Treasurer	:	Vd. L.K. Kulkarni

Executive Comittee :

Dr. O.P. Mehrotra
Vd. A.K. Baranwal
Prof. S.K. Mishra
Dr. R.C. Srimal
Dr. O.P. Asthana
Dr. G.K. Patnaik
Dr. P.K. Mehortra
Dr. H.P. Sharma
Dr. Ashwini Kumar
Vd. U.C. Sharma
Mr. W.F. Rahman
Dr. Girish Gupta
Hm. A.B. Alvi

Convenors & Members of Comittees

Dr. S.S. Iyer
Dr. M.B. Bande
Dr. R.K. Sharma
Dr. P.K. Mehrotra
Dr. Anil Rastogi
Dr. J.S. Tandon
Mr. S.K. Mallik
Pt. Madhavacharya
Dr. A.K. Goyal
Dr. Sheela Tandon
Hm. Saad Usmani
Mr. A.K. Srivastava
Ms. Seema Mehrotra
Mr. M. K. Thapar
Mr. Krishna Prasad

SOUVENIR & COVER DESIGNED BY
Sri Ali Kausar

Organised by Lok Swasthya Parampara Savardhana Samithy in collaboration with Academy of Young Scientists & Central Drug Research Institute, Lucknow.

Sponsors : C.A.P.A.R.T., D.S.T., C.C.R.U.M. & D.G.H.S., Govt. of India.

National Convention on Management of Jaundice

PROGRAMME

14 SEP 1991

8.30 - 09.30 A.M **REGISTRATION**

9.30 - 10.50 A.M **INAUGURAL SESSION**

9.30 A.M. -	Welcome Address	*Dr. R.C. Srimal*
9.35 A.M. -	Introduction to Convention	*Dr. N.N. Mehrotra*
9.45 A.M.-	Inaugural Address	*Prof. B.N. Tandon*
10.05 A.M. -	Key Note Address	*Prof.B.N. Dhawan*
10.30 A.M. -	Presidential Remarks	*Vd. B.D. Triguna*
10.45 A.M.	Vote of Thanks	*Prof. S.R. Naik*

10.50 A.M. - *TEA BREAK*

11.15 A.M. - 1.15 P.M. **SESSION I**

PATHOPHYSIOLOGY OF JAUNDICE & EVALUATION OF PATIENT STATUS

Chairpersons : *Prof. R.M.L. Mehrotra & Vd. Subhash Ranade*

11.15 A.M. -	Samprapti of Kamala -	*Vd. D.S. Antarkar*
11.35 A.M. -	Pathophysiology of Jaundice: Allopathic viewpoint -	*Prof. Raj Mehrotra*
11.55 A.M. -	Unani View Point -	*Prof. M. Taiyab*
12.10 P.M. -	Yakrut Agni Relationship of Kamala-	*Prof. B.V. Sathye*
12.25 P.M.	Clinical Evaluation of Kamala -	*Prof. C.B. Dubey*
12.40 P.M. -	Evaluation of Patient Status in Jaundice -	*Prof. S.R. Naik*
12.55 P.M. -	**Discussion**	

1.15 - 2.15 P.M. *LUNCH*

2.15 - 3.15 P.M. **POSTERS** (To be put up by 1.00 P.M.)

3.15 - 3.30 P.M. - *TEA BREAK*

3.30 - 5.45 P.M. **SESSION II**

CLINICAL MANAGEMENT OF JAUNDICE

Chairpersons: *Dr A.B. Vaidya, Vd. D.S. Antarkar*

3.30 P.M. -	Knowledge, Attitudes and Practices on Jaundice-	*Dr. O.P. Asthana*
3.45 P.M.	Allopathic Management of Jaundice -	*Dr. A.R. Sircar*
4.00 P.M. -	Unani Practices in Management of Jaundice -	*Hm. Ifhamullah*
4.15 P.M. -	Ayurvedic Management of Kamala -	*Prof. R.K. Mishra*
4.30 P.M. -	Treatment of Jaundice in Homeopathy -	*Prof. N.D. Sindhi*
4.45 P.M. -	Siddha Management - of Kamala	*Sidh Vd. Brhmanand Swamigal*
5.00 P.M. -	Comments on Posters by	*Vd. S.K. Mishra, Hm.Saad Usmani & Dr. Ashwini Kumar*
5.20 P.M. -	**Discussion**	

5.30 P.M. - *TEA FOLLOWED BY CULTURAL PROGRAMME*

7.30 P.M. - *DINNER*

15 SEP 1991

SESSION III

10.00-11.45 A.M.

REVIEW OF RECENT RESEARCHES

Chairpersons: *Hakim Abdul Razzak and Dr. R.C. Srimal*

10.00 A.M. - Key Note Lecture - *Dr. A. B. Vaidya*

10.30 A.M. - Hepatoprotective activity of Indian Medicinal Plants- *Dr. G.K. Patnaik*

10.45 P.M. ... Recent Studies in Ayurveda & Siddha - *Vd. D.S. Antarkar*

11.00 A.M. ... Recent studies in Unani - *Hm. (Mrs) U. Fazal*

11.15 A.M. ... Recent Developments in Management of Non-obstructive Jaundice - *Dr. S.K. Sarin*

11.30 A.M. ... Discussion

11.45 A.M. ... *TEA BREAK*

SESSION IV

12.00 - 1.15 P.M.

JAUNDICE EPIDEMICS AND THEIR MANAGEMENT

Chairpersons: *Dr. V. B. Sahay, Siddha Vd. K. Viswanath Sarma*

12.00 P.M. ... Epidemics of Viral Hepatitis- *Dr. R. Agarwal*

12.20 P.M. ... Ayurvedic Management of - Kamala Epidemics *Vd. C.G. Joshi*

12.35 P.M. Role of Voluntary Organizations - *Dr. Bharatendu Prakash*

12.45 P.M. ... Homeopathic Management of Epidemic cases - *Dr. Girish Gupta*

1.00 P.M. ... **Discussion**

1.15 P.M. ... *LUNCH BREAK*

2.30-3.45 P.M. ... **PANEL DISCUSSION- STRATEGIES FOR MANAGEMENT OF JAUNDICE**

Chairperson : *Dr. S.R. Naik*

Panelists : *Vd. A.K. Baranawal, Lucknow*
Hakim D. Gracias, Madras
Dr. Jayant Doshi, Bombay
Vd. R.H. Singh, Varanasi
Vd. Smt S. Kopikar, Bombay
Dr. V.T. Augustine, Delhi
Dr. S. K. Sarin, Delhi
Vd.G.G. Gangadharan, Coimbatore

3.45 P.M. ... *TEA BREAK*

4.00 P.M. - 5.00 P.M. **CONCLUDING SESSION**

Chairperson- *Dr. B.N. Dhawan*

4.00 P.M. ... Recommendations of the Seminar - *Dr. O. P. Asthana*

4.15 P.M. ... Discussion on Recommendations

4.45 P.M. ... Chairperson's Remarks *Dr. B. N. Dhawan*

5.00 P.M. ... Vote Of Thanks - *Dr. N.N. Mehrotra*

GOVERNOR

UTTAR PRADESH

RAJ BHAVAN
LUCKNOW

August 22, 1991.

MESSAGE

I am delighted to know that a National Convention on Management of Jaundice is being convened on September 14 & 15, 1991 at Central Drug Research Institute, Lucknow in which Health Professionals, Health Care Planners, Scientists and Community Health Organisations including Centre & State authorities are participating. A souvenire is also being published to mark the occasion.

So far the Jaundice has been traditionally managed in the Indian Systems of Medicine by using locally available medicinal plants. I hope on the basis of experience and constant research, the scientists and experts will analyse at lenth the strengh and weakness of the present diagnosis as well as simple management of Jaundice and related disorders; and valuable suggestions will be brought out and some strategy for the same will be evolved.

I wish every success to the Convention and publication of the souvenir.

B. Satya narayan Reddy

(B.Satyanarayan Reddy)

कृषि मंत्री
भारत सरकार
नई दिल्ली-110001
AGRICULTURE MINISTER
GOVERNMENT OF INDIA
NEW DELHI-110001

August 19, 1991

MESSAGE

It is interesting to learn that Lok Swasthya Paramapara Samavardhana Samithy will hold a national convention on Management of Jaundice in mid-September. This disease is nerve-breaking inflicting weakness on the patient. At times,infants suffer from it, in some cases, fatally. I find that the convention has comprehensive agenda to cover a number of subjects. While curative measures are important, what is actually important is to diagnose the causes of jaundice and educate the masses for its prevention.

I wish the Convention all success.

(BAL RAM JAKHAR)

WORLD HEALTH ORGANIZATION

REGIONAL OFFICE FOR SOUTH EAST ASIA

Tel : 331 7804 - 23 Telex: 31-65031 & 31-65095
Fax : (91) - 11 - 331 8607 & (91) - 11 - 332 7972

MESSAGE

On the occasion of the National Convention on Management of jaundice which is being held at the Central Drug Research Institute, Lucknow, I have great pleasure in sending my felicitations and good wishes for a very successful and productive conference.

I note with great satisfaction that the Convention will focus its attention on the role that the traditional systems of medicine are playing in finding solutions to a variety of liver disorders.

Many elements of traditional medicine are beneficial, but others are not, and some are definitely harmful. In this respect, the Organization encourages countries to identify and provide safe and effective remedies and practices for use in the public and private health services. WHO encourages that traditional medicine is examined critically with an open mind.

Within the context of an overall health research strategy, national research establishments should continue to investigate the safety and efficacy of many of the remedies used by traditional health practitioners from the point of view of ethnobotny, medical anthropology, experimental pharmacology with clinical practice.

I wish this national Convention all success.

21 August, 1991

Dr. U Ko Ko
Regional Director

Lucknow's Fresh And Broken Images

Km. Veena Tandon, Lucknow.

Oh ! if only I thought I had a chance to write something about Lucknow. It has an individuality of its own. It has not, like some of our great cities a past which runs through the tangled histories of Hindu princedom and Muslim invasions; it has been little even of the great Mughals; but starlit on a moonlit dome, unpurged images, all portraying its character, which every resident of Lucknow knows. Turning and turning in the widening gyres, its buildings, architecture and traditions are mixture of oriental and western extravagance. The gentle and gracious ways of people, cock fight and pigeon flying still remind us the glorious days of Oudh culture. It never loses a strong human interest. It has no picture of far off and half understood things. Every resident of Oudh was 'Nawabi' and remains 'Nawabi'; 'Nafast', a fine sensibility in every walk of life, a glory of changeless metal, in the restless ecstasy.

All the monuments, with their glory of past offer manifold allusion and fresh images. Residency stands upon what was then the highest point of Lucknow, now includes a large protected enclosure, has a tongue to vex any visitor. Alambagh on the Kanpur road was built by Wajid Ali Shah, the last king of Oudh. The Badashahbagh built by king Nasir-ud-din Haider, where were held the festive gatherings of the period. The 'Chatter Manzil' was once a palace belonging to the kings of Oudh. Great Imambara was built by Nawab Asaf-ud-Doulah in the year 1784, a stately building pronounced to be one of the most imposing in the world. Husainabad Imambara 'the palace of lights' a name given by King Mohammad Ali Shah, Lucknow shrines, Lucknow bridges, spanning the Gomati, Lal Baradari, La Martiniere, Hazaratganj once echoed with adorn songs and courtly show, still have life and activity.

Ravening through the century after century, fresh images beget, civilization embedded together, brought under a rule and with an idea to let every man be master of his time, destruction dwells in doubtful joy and agony of trance is in sight from tomb, dome and culture. As the old order changeth yielding place to new, new buildings are erected, like Shakti Bhawan, Jawahar Bhawan, Kisan Bhawan, Artifical Limb and Rehabilitation Centre. Several new scientific research institutes have come up in tune with its long tradition of learning.

Now the one good custom 'Nawabi' nourish a blind life within the brain. This city is becoming an 'unreal city' under the brown fog of industries which are rising like corpse you planted last year in your garden has begun to sprout. When a great tomb-hunter sweeps the distant sky, with a bird's round eye something lingers there, that are soriest fancies and else die. The gardens, parks, the monuments and buildings are emblems of past and present; have a character isolated by deed, to engross the present and dominate memory.

Lucknow's Scientific Institutions

State Ayurvedic College Lucknow

Prof. R. K. Mishra, Lucknow

This college was established in the premises of King George's Medical College, Lucknow in the year 1949 under the patronage of Late Shri C.B. Gupta and Late Shri Acharya Narendra Deo, the then Vice Chancellor of Lucknow University. In 1954 it was shifted to its present premises at Tulsidas Marg, Lucknow.

The course of B.M.B.S. was changed to B.A.M.M.S. in 1959. The only State Ayurvedic college in the whole province of Uttar Pradesh was upgraded to the Post Graduate teaching where M.D. (Ayurvedic) degree was started in the Department of Kaya Chikitsa and Sharir.

As per the instructions of C.C.I.M., B.A.M.S. Course was started in 1977. This is a 5 year degree course. At present this college is possessed with an Academic Block having well equipped Pathology and Biochemistry labs, and X ray facilities and a 230 bedded hospital. There is arrangement of specialization in the diciplines of Panch Karm & Kshar Sootra therapies and Yoga. In addition to this, a 3½ year course of nursing (Ayurveda) is available since 1970. Hostel facilities for both boys and girls are also available in this college.

State Takmil-ut- Tib College

Hakim Gheyasuddin Nadvi, Lucknow.

The city of Lucknow on the one hand is highly famous for its historical buildings, society, language, and harmonious culture; on the other hand it has established its high repute in the developement of literature and sciences specially in the field of oriental studies. It has developed a separate school of thought in Unani Medicine parallel to that of Delhi. The centre of this school is the state Takmilut Tib College, situated in Mohalla Jhawai Tola of old Lucknow.

This college was founded in 1902 by late Al-Haj Hakim Abdul Aziz (1855- 1911), a well-Known scholar of Unani Medicine and a renowned personality of medical profession in India. A hospital was also established under the college. Both the college and hospital have served the nation beyond expectations in the field of medical teaching and health care.

This college has produced a great number of medical teachers and physicians of very high standard and values. Some of the graduates viz. Shifaul Mulk Hakim Abdul Latif Falsafi, Hakim Abdul Moeed , Hakim Abdul Haleem, Shifaul Maulk Hakim Khwaja Shamsuddin, Hakim Syed Ali Ahmad Nayyar warti, Hakim Tabarak Karim Takmili, and Hakim Shakil Ahmad Shamsi Rane made a history .

The State of U.P. took over- the college on July 2, 1982 and since then it is running under the direct control of U. P. Government.

Central Drug Research Institute

The institute was established in 1951 and was housed in the historically famous Chattar Manzil palace, the magnificent edifice of the era of the Nawabs. The main aims of the institute include production of drugs from the indigenous plants and natural products as well as to develope certain synthetic drugs for industrial production. This pioneer institution is functioning under the umbrella of the Council of Scientific and Industrial Research. The scientific personnel of the institute have done quite a marvellous job towards achieving the goals set up by its founders. The Institute has recently released four drugs namely Centbucridine (A local anesthetic), Gugulipid, (hypolipidaemic produced from the resin of *Commiphora mukul*) Centbutindole (a neuroleptic) and Centimizone (an anti-thyroid compound) in 1987 apart from a quick diagnostic technique for filariasis. Recently, the institute has achieved a landmark by releasing for the first time in the world, a once-a-week oral contraceptive pill which is now available in the market (initially in Delhi only) by the trade name Saheli and Choice 7. Apart from these, institute has developed many new techniques for their use in pharmaceutical industry.

Central Institute of Medicinal and Aromatic Plants

The Institute was established in 1959. It is a coordinating organisation for all the agencies engaged in the area of medicinal and aromatic plants all over the country. Extensive research is carried-out here to popularise the plantation and production of indigenous as well as imported varieties of plants. The head office situated in the outskirts of the city has its regional centres in Bangalore, Jammu & Kashmir, Srinagar (U.P.) Haldvani etc.

Due to the efforts of its scientists, the annual production of menthol and mentha oil has gone up to about Rs. 20 million. Institute also organises practical training courses for the farmers of Citronella oil, Ergot, Tulsi etc. Some profitable plants have also been grown and popularised by the institute.

National Botanical Research Institute

The institute got its present name in 1953 when CSIR took over the prestigious National Botanical Gardens. The Garden has been in existence ever since the days of the Nawabs and was called Sikandarbagh. The famous horticulturist, Prof. K.N. Kaul was its founder Directer.He nursed this garden with an aim to convert it into a pioneer organisation not only for basic and applied research on botanical plants but also into a major centre for popularing horticulture to the masses. The institute has done extensive study on the medicinal and other properties of plants and on the remedies of plant diseases. Lot many commercial plants have been developed and grown by the institute. The scientists have improved many existing varieties of commercial as well as ornamental plants for their optimum use.

Industrial Toxicology Research Centre

The organic compounds, chemicals and other toxic metals that are used in various industries are creating many physical hazards to the people working in those industries in particular and the others in general. To study and analyse these hazards, the Industrial Toxicology Research Centre was established in 1965 by CSIR. The institute is engaged in the research and remedies from toxic effects of chemicals, fertilizers and machines used regularly by the farmers in course of their day to day work. Similarly, the industrial workers engaged in the glass, lead chromate, rubber and other industries are exposed to many diseases related to lungs, instestines and other organs of the body. The scientists of the institute are engaged in the study of this vital area of the modern industrial society. Besides, it is involved in several Technology Missions on water, oil & Ganga Action Plan.

(Adaptation by Mr. S.K. Mallik from an article by Ms Neena Mathur, Lucknow.)

Concept And Planning Of A Tertiary Health Care Center

Sanjay Gandhi Post-Graduate Institute of Medical Sciences

Dr. R.K. Sharma & Dr. S.R. Naik

S.G.P.G.I., Lucknow.

The state of UP in 1980 decided to start a tertiary health care facility. This is a departure from the usual approach of providing primary health care with out any integrated access to tertiary health care. This would go a long way in meeting the long standing demand for all round specialised

health care for every one in the state. It was thus the concept of starting a post- post graduate institute like Sanjay Gandhi Post Graduate Institiute of Medical Sciences (SGPGI) came into reality. Though the debate for and against such a tertiary care center in the present scenario of sparse resources would go on for quite sometime, but the state leadership - political, b ureaucratic and technical, have shown a bold determenation, a broad vision and foresight in deciding in favour of making SGPGI a national center of excellence open to every Indian citizen. SGPGI was born in 1981 and the basic concept has undergone progressive modifications as the new ideas evolved and took a shape of reality. The three main objectives of SGPGI include : (i) provision of excellent medical care, educational and research facility in super specialities; (ii) development of patterns of postgraduate training and teaching in these areas (iii) Training of paramedical and allied health personnel related to the various super specialitis. SGPGI is being developed as a referral center for the whole of UP state and the nighbouring areas.

It would provide the necessary tertiary health care and act as a center for the development of advanced technology in medicine specially suited for the Indian situation. A major portion of high-tech equipment has been proceesed through the generous grant from the Japanese Government. The all India cadre of facilty has provided a broad outlook based on a varied and rich experience; both national and international.

SGPGI has been chartered to function as a 'University' and as a center of excellence for providing medical care, education and research of a high order, such as is available in few centers in the country. SGPGI has been developed as an apex referral center for superspeciality medical care, post-post graduate education and basic and clinical research.

The project is conceived to evolve in phases. In the first phase six specialities have been commissioned : (i) Renal sciences (ii) Cardiac-sciences (iii) Neuro-sciences (iv) Gastroenterology (v) Endocrinology (vi) Genetics and Immunology. The hospital complex has become functional with 250 beds. Each sub-speciality is involved in ambulatory care through outpatient clinics. The capacity of the main hospital is likely to expand to 600 beds by the end of second phase and to 1800 beds by the end of third phase, with sixty beds in each of medical and surgical counterparts of the subspecialities. In addition centers of Radiation sciences (Radio-diagnosis, Nuclear Medicine and Radiothrapy), Anaesthesia, Blood transfusion Medicine, Microbiology and Pathology have started functioning. The institute is involved in post-doctoral training programmes which have been started in all the subspecialities leading to the award of D.M. and M.Ch. degrees. In the specialities of Radiotherapy, Nuclear Medicine and Blood Trunsfusion Medicine MD programmes have been commissioned. The Institute has also enrolled students for PhD programmes in various disciplines involved in basic research. Apprentice technician training course has also been started.

National Convention on Management of Jaundice

Dr. N. N. Mehrotra

Liver is one of the most importantorgans of the body involved in a large number of metabolic functions. There has been a lot of resurgence in the study of a number of liver disorders and their management, particualry after the development of a series of liver function tests. However, we are yet to develope simple and efficacious cures for several of liver disorders. On the contrary, the traditional systems of medicine are known to have some very effective remedies for several liver disorders. In fact a lot of these have been subject of coordinated research not only in I.C.M.R. but also at several international research institutions and agencies. Many of these are also known to have provided useful leads.

Lok Swasthya Parampara Samvardhana Samithy has been concerned with the promotion of Local Health traditions, particularly for primary health care. In its efforts to promote simple management of some of the primary health problems, it has been working towards evolving strategies for their management using locally available resources. This National Convention on the Management of Jaundice is being organized with a similar objective in mind.

The convention would, therefore, analyze at length, the strengths and weaknesses of the diagnosis as well as simple management of jaundice and related disorders as known to different systems of medicine. Health professionals, Health Care Planners and authorities from the states as well as centre, Scientists and Community Health Organizations are invited to participate in the discussions to evolve a strategy for the same.

In this convention an attempt is being made, perhaps for the first time in the country, to bring together experts from different systems of medicine with a view to evolving a common consensus among them towards management of a comparatively well defined health problem. The idea is to evolve a mutually acceptable rational strategy for management of a commonly defined (agreed upon) disease condition. It was for this reason that the scope of discussion has been kept limited to non-obstructive type of jaundice. While there can be several causes even for non-obstructive type of jaundice, most common of them all is viral hepatitis. According to Ayurveda **Koshthashray Kamala** can again be due to several causes but all of them result in an increase in vitiated **Pitta.**

The line of management in most such cases is, therefore, similar except for the involvement of other **Doshas** or other associated diseases viz. for **'Paratantra Kamala'**

Similalrly in Unani, **Yarquan-e-Ghair Suddi** could be due to change in **Mizaz** (temperament) of the liver (Kabid) or due to excess production of **Safra** (bile) while a category involving other diseases **(Yarquan-e-Bohrani)** has also been defined. It should thus be possible to evolve a common strategy for management of Non-obstructive Jaundice based on known strenghths of each system. In order to have a better appreciation of each other's framework, it is proposed to devote the first session to pathophysiology and methodology for evaluation of patient status, as understood in each system. The clinical management of Jaundice shall be discussed in the light of this common understanding.

While a few original research studies have been communicated as poster presentations, we may discuss these posters during the presentations on clinical management. Before discussing the actual strategies in the Panel, it is proposed to take stock of latest developments which should be taken into consideration before finalising the strategies. A separate session has also been proposed on epidemic of Jaundice and their management since these constitute an important issue as seen by recurrent outbreaks of such epidemics.

It is expected that an active discussion will help evolve strategies which can be actually implemented in health care programes in a manner where role of practitioners of all systems of medicine will be duly acknowledged.

Background Papers

1	**Pathophysiology of Jaundice**	Dr. A.S. Puri & Dr. S.R. Naik,Lucknow
2.	**Jaundice in Unani**	Hm. Saad Usmani, Lucknow
3.	**Ayurvedic Management of Kamala**	Prof. R.K. Mishra, Lucknow
4.	**Kamala in Ayurveda**	LSPSS
5.	**Botany and Pharmacology of some Herbs used in Jaundice**	Hm. S. Imam etal, Hyderabad.

Pathophysiology Of Liver Disease

Dr. A S Puri & Dr. S R Naik

Functions

The liver has synthetic and excretory functions in addition to its role in biotransformation of drugs.

Synthesis

Liver synthesises various plasma proteins such as albumin,fibrinogen, alpha-1-anti-trypsin, ceruloplasmin, prothrombin, transferrin and hepatoglobulin. Approximately 10-12g of albumin is synthesised by the liver daily in a healthy adult versus about 4g in a cirrhotic. The half-life of albumin is about 3 weeks. Hence a patient with fulminant hepatic failure (of shorter duration than 8 weeks) will have normal serum albumin levels whereas the decompensated cirrhotic invariably has low serum albumin. On the contrary, as prothrombin has a very short half life,it is deranged in both acute and chronic liver disease depending on the extent of the liver damage. The liver manufactures other vitamin K dependent clotting factors namely factor Vll and factor X. With diffuse hepatic involvement, as occurs in fulminant hepatic failure, there is a precipitous fall in these clotting factors manifesting as spontaneous bleeds in the GI tract,skin and brain or prolonged bleeding from venipuncture sites.

The liver is also the site of synthesis of cholesterol. Cholesterol is the precursor of many hormones as well as bile salts. Cholesterol is synthesised from acetate by the hepatocytes; the rate limiting step in the formation of cholesterol is the conversion of HMG-CoA to Mavelonic acid by the enzyme HMG-CoA reductase. Whereas bile contains mostly free cholesterol,cholesterol in the plasma is present in the form of cholesterol esters. Esterification is carried out in plasma by the enzyme lecithin cholesterol acyl transferase. Total cholesterol and cholesterol esters are increased in obstructive jaundice possibly due to regurgitation into plasma of biliary phospholipid . Very high values of cholesterol and its esters are found in primary biliary cirrhosis and post-operative biliary tract strictures. Values of over five times the upper limit of normal are associated with skin xanthomas.

The liver is the only site for the synthesis of bile acids. Primary bile acid- chenodeoxycholic acid and cholic acid- are formed in the liver and excreted into the bile. Secondary bile acids are formed in the colon by 7-

Address : *Department of Gastroenterology*
S.G.P.G.I., P. Box 375, Lucknow - 226 001

alpha dehydroxylation of cholic acid to deoxycholic acid and chenodeoxycholic acid to litho-cholic acid. Bile acids are conjugated in liver with glycine and taurine to form bile salts. Bile salts form micelles which are essential for emulsification and absorption of fats. They are also responsible for excretion of cholesterol in bile. Altered biliary excretion with defective biliary micelle formation is important in the formation of gallstones. Diminished excretion of bile salts also leads to excess passage of fat in stools.

Excretion

The liver plays an important role in the excretion of bilirubin which is a waste product derived from dead and dying red cells. Hemoglobin from red cells is broken down into heme and globin. Aproximately 35 g hemoglobin is broken down daily and 300 mg bilirubin is formed. The bilirubin so derived is unconjugated,water insoluble and tightly bound to albumin. The hepatocyte is able to take up this unconjugated bilirubin via receptors on the plasma membrane and a carrier protein ligandin which transports it to the endoplasmic reticulum . Conjugation to bilirubin monoglucuronide and diglucuronide is mediated by the enzyme UDP glucuronyl transferase. Bilirubin glucuronide thus formed is water soluble and is excreted into the bile. In the large intestine deconjugation occurs due to the action of bacteria and urobilinogen is formed. In the presence of bacterial infection of bile ducts,bilirubin glucuronide gets converted to unconjugated bilirubin . which gets precipitated . This may form as a nucleus for the formation of pigment gallstones.

Urobilinogen is non-polar and is well absorbed from the small intestine but only minimally from the colon. The little that is absorbed is re-excreted by the liver and kidneys (entero-hepatic circulation) . With hepatocellular dysfunction re-excretion by the liver is impaired and more urobilinogen is excreted in the urine. This accounts for the urobilinogenuria of alcoholic liver disease and early stages of viral hepatitis. Understandably urobilinogen is absent in the urine in obstructive jaundice.

In hemolytic jaundice there is excess production of bilirubin which saturates the uptake capacity of the hepatocyte. Most of the bilirubin is unconjugated and tightly bound to albumin. This jaundice may pose only an aesthetic problem in adults but in neonates the result can be disastrous. When the albumin capacity has been saturated, unconjugated bilirubin, which is lipid soluble crosses the immature blood-brain barrier of neonates and binds irreversibly to brain tissue causing permanent brain damage kernicterus. This never happens in the adult as the blood brain barrier is impermeable to bilirubin.

In the familial hyperbilirubinemias the defect lies in the conjugating enzyme UPD-glucurony1 transferase or in the excretory system. There may be partial or complete absence of this enzyme as expressed in Crigler-Najjar Syndrome Types I and II respectively. In type I

Crigler-Najjar syndrome, jaundice responds to phenobarbitone which acts by induction of the microsomal enzyme system.

Dubin-Johnson syndrome and Rotor syndrome are examples of congenital jaundice due to defective excretion of conjugated bilirubin . It is recognized that there are at leat two independent systems for biliary excretion of organic anions; one for bile salts and the other for organic anions including bilirubin.In Dubin Johnson syndrome there is defective excretion of conjugated bilirubin , whereas bile salt excretion is normal.

In obstructive jaundice as well as in hepatitis there is conjugated hyperbilirubinemia. Pruritus clay coloured stools and dark urine with little constitutional symptoms are the hallmarks of obstructive jaundice whereas anorexia, nausea, vomiting and right upper quadrant discomfort are the usual accompaniments of hepatitis. In severe cases there is mental obtundation and irrelevant behaviour.

Biotransformation of drugs

Liver enzyme systems may convert a drug into more active or an inactive compound. Principal enzyme system in the liver is located in the smooth endoplasmic reticulum . Microsomal enzymes conjugate morphine into an inactive compound-morphine glucuronide; phenobarbitone is oxidized to hydroxy phenobarbital which is inactive. On the contrary 6-mercaptopurine is converted to an active compound by non-microsomal enzymes. Several drugs either induce or inhibit the microsomal enzyme system, thereby altering the plasma level of the drugs. Dicoumarol inhibits the metabolism of phenytoin and can increase the incidence and severity of side effects of phenytoin such as ataxia and drowsiness. Simultaneous administration of phenobarbitone and dicoumarol results in lower plasma levels of the latter due to enzyme induction by phenobarbitone. Certain drugs and chemicals are directly hepatotoxic. Acetaminophen (paracetamol) is a commonly abused drug for suicidal purpose which is normally excreted by the liver after conjugation to glucuronide of sulfate forms. When toxic doses(10-12 g) are ingested, the drug is metabolized to a toxic intermediary which depletes glutathione,interacts with hepatic proteins leading to hepatic necrosis. Carbon tetrachloride has a delayed toxic effect on the liver. It causes zone 3 necrosis and fatty changes due to the formation of free radicals by cytochrome $P450_0$ dependent enzyme system. Two fungal toxins deserve mention for their role in liver injury. Ingestion of Amanita phalloides (a poisonous mushroom) causes massive hepatic necrosis by virtue of blocking RNA synthesis in hepatocytes. Aflatoxins derived from the fungus Aspergillus contaminate stored grains especially cereals and ground nuts. Population studies in widely separated geogaphical areas show a correlation between aflatoxin exposure and hepatocellular carcinoma.

Clinical Features of Liver Disease:

Although symptoms and signs of liver diseases are multiple and the spectrum is wide ,they may be grouped together to give the well Known manifestations of liver diseases.

(A) Acute Hepatitis

Hepatitis implies inflamation of the liver and may result from viruses, drugs or toxins. Viral hepatitis is the most common cause of acute hepatitis. Several viruses have affinity for the liver of which the most important are Hepatitis viruses A,B,C,D and Non-A Non-B. Hepatitis A,B, and a distinct water-borne virus (Hepatitis E) account for the majority of hepatitis cases in our country. Viral hepatitis is marked by a prodrome of anorexia, fever and bodyaches before the onset of the jaundice. The prodromal period may range from 3 days to 3 weeks. The prodromal period is followed by darkening of urine and passage of light coloured faeces. This heralds the development of jaundice and symptoms decrease. The icteric period ranges from 1 to 4 weeks in the uncomplicated patient. In most cases the patient makes a complete recovery from the icteric episode.

(B) Chronic liver cell disease or cirrhosis

As compared to the hepatitis syndrome,the onset of symptoms in chronic liver diseases is insidious. Symptoms are variable and may fluctuate during the course of the disease. Unlike the hepatitis syndrome, recovery is almost always incomplete with the majority of the patients pursuing a downhill course. In the mildest cases there may just be anorexia, feeling of ill health, weakness or loss of libido. Commonly symptoms of fluid retention (ascites and edema) bring the patient to the doctor. Jaundice may be present but is usually not as severe as in hepatitis. In cirrhosis neuropsychiatric symptoms may dominate the clinical picture. Hematemesis and melena occur in approximately one third of cirrhotic with portal hypertension. These account for major mortality and morbidity in these patients. Approximately one third to one half of cirrhotic will die of progressive liver cell failure manifesting as hepatic encephalopathy . Cirrhosis in India mostly occurs either due to viral infection of the liver or alcohol abuse. Viral infections may have been present in the remote past and hence a history of jaundice is not always forthcoming.

(C) Obstructive jaundice

Majority of the cases with obstructive jaundice in our country are due to cancer of the pancreas and hepatobiliary tract or gallstones which have migrated into the common bile duct. Classically, malignancy produces a painless progressive jaundice with weight loss whereas jaundice due to gall stones is usally antedated by repeated episodes of biliary colics. Fluctuating jaundice is the hall mark of choledocholithiasis but it may also be seen with periampullary cancers.

Pruritus and clay colored stools are commonly encountered in obstructive jaundice. Physical examination reveals jaundice with shiny nails and scratch marks but no stigmata of chronic liver disease. The liver is usually enlarged and firm. A palpable gall bladder is a pointer towards malignancy of the pancreas.

(D) Hepatocellular Carcinoma

Hepatoma or primary liver cell cancer is much less common than metastatic liver diseae. Two predisposing factors for the development of hepatoma are chronic Hepatitis B viral disease in South-East Asia and alcoholic cirrhosis in the West. Aflatoxin have also been incriminated as a predisposing factor. It may present as a lump the right upper quadrant with or without jaundice or it may manifest as unexplained deterioration in a stable cirrhotic.

Management of Liver Disease

Bed rest

The management of liver disease was limited until the 1960's to rest,diet restrictions and diuretics for the management of ascites and edema. Bed rest has been recommended for acute hepatitis since World War II when it was seen that there was reduction in hepatic blood flow during erect posture. Later studies have failed to show that bed rest shortens the icteric phase or alters the outcome in any way. Current recommendations are avoidance of undue physical excretion,but it is unnesessary to confine the patient to his bed for long periods of time.

Diet

Dietary recommendations in acute hepatitis is a haystack of misconception with a needle of truth . There is no justification in stopping fat in a patient with acute hepatitis and subjecting an already anorexic patient to an unappetizing diet of boiled food. Protein restriction is recommended in hepatic encephlaopathy. Salt restriction is useful for control of ascites. Patients with acute uncomplicated hepatitis should be encouraged to eat their normal diet;all attempts should be made to make the food more appetizing.

Corticosteriods

The major achievement in the treatment of liver diseases was in the early 70's when treatment with corticosteroids was found to be useful in severe chronic active hepatitis. Prednisolone treatment achieves clinical and biochemical resolution in 80% cases. Studies from the Royal Free Hospital,London showed that 60% of patients with severe choronic active hepatitis of the autoimmune variety were alive at 10 years as compared to about 20% of the untreated group. The effect of corticosteroids on hepatic histology is however variable and unconvincing.

Antiviral drugs

Antiviral therapy has been the achievement of the 80's in hepatology. Interferons are small protein molecules produced by leucocytes in response to viral infections. Interferons enhance destruction of diseased hepatocytes. The drug is given intramuscularly three times a week for three months. Side effects are few. Evidence of viral infection in the blood disappears after 8- 12 weeks of therapy and is marked by an increase in transaminases as the infected liver cells get destroyed . Hepatic histology changes from chronic active hepatitis to inactive chronic hepatitis. Interferon therapy has also been used successfully in patiets with non A-non B hepatitis (NANB Hepatitis). Duration of interferon therapy is uncertain; a fair proportion of patients relapse after early response. Relapse rates may be reduced with prolonged therapy upto 12 months. The future in this area seems to promise answers to many unsolved questions.

Endoscopic variceal Sclerotherapy

Endoscopic sclerotherapy of enlarged veins in the oesophagus has come back with a bang in the late 70's and early 80's . It has proved to be effective in controlling actively bleeding oesphageal varices , in decreasing the number of rebleeds in patients with bleeding varices and possibly in increasing the patient survival. Scerotherapy has now largely replaced shunt surgery in the management of portal hypertension.

Immunization

Immunization against Hepatitis B aims to prevent HBV related disease. The most widely used vaccine manufactured by Merck, Sharpe and Dohme USA consists of an inactivated subunit of the virus containing the HBsAg. It is manufactured by concentration, purification and inactivation of the hepatitis B virus from human donors with high titres of HBsAg in their plasma. This vaccine contains 20 mcg/ml of HBsAg. Three doses are given at 0,1 and 6 months. Lower doses are needed for children less than 10 yrs and higher doses for the immunosuppressed. The short term protective efficacy of Hepatitis B vaccine for the prevention of clinical hepatitis B. is approximately 95%. Because of the cost and limited availability of vaccine, vaccination strategy is limited to selective immunization of high risk groups and of children born to infected mothers. with the availability of the recombinant vaccines one may hope to see a universal immunization programme in the future.

Liver Transplantation

With recent advances in surgical techniques, better availability of donor livers and superior immunosupressive therapy,liver transplantaion has become an established therapy for patients with end stage liver disease. The form of liver transplanation used today is orthotopic liver transplantation in which the diseased liver of the host is removed and replaced with the donor liver (homograft) as opposed to heterotopic

transplantion in which an extra liver is inserted at an ectopic site. Liver transplantation should be considered in patients with chronic irreversible liver disease for whom no alternative therapy is available. It is essential that patients undergoing liver transplantation have no contra-indications to the procedure such as advanced age,advanced cardiopulmonary or renal disease,coexisting malignacy outside hepatobiliray system or metastatic cancer. In adults the major indications for liver transplatation are end stage cirrhosis especially primary biliary cirrhosis, sclerosing cholangitis, chronic active hepatitis and fulminant hepatitis due to toxins.

Liver tranplanatation is available in few countries all over the world and the best results(5 yr survial of 70%) are seen in primary biliary cirrhosis and sclerosing cholangitis. For our country liver transplantation is still a distant dream.

The Concept Of Jaundice,its Diagnosis And Management Of Non-obstructive Jaundice In Unani System Of Medicine

Hakim Saad Usmani

Jaundice or YARQAN as the Unani physicians call it has been defined as a clinical condition characterised by yellow discolouration of the skin and eye etc due to the copious flow of the humour Safra (yellow bile) or Sauda (Black bile) towards them resulting in the increase of bile pigments in the tissues.

Yarquan is a disease known since long. The father of Unani Medicine HIPPOCRATES (460 B.C.) popularly known as BUQRAT has dealt in detail on the subject. Rhazes (Razi) in his book 'Al - Havi,' besides dealing on the disease Yarqan and describing its various kinds is of the view that one of its kind is the *"Epidemic Jaundice"* or *"Yarqan Wabai"*. AVICENNA (IBN SINA) famous by the title of Persian Galen has also in his celebrated medical encyclopaedia " Al-Qanoon-fit-tib (The Canon of Medicine) is of the opinion that contaminated water, faulty diets and unhygienic surroundings are the main causes of Yarqan, and that there are seven types of Yarqan accoding to him.

TYPES OF YARQAN :

The ancient Unani physicians have classified Yarqan basically into two main groups namely (1) YARQAN-E-SUDDI (Obstructive Jaundice) and (2) YARQAN - E- GHAIR SUDDI (Non-obstructive Jaundice)

Nafis Bin Kirmani, another Unani physician of repute has futher classified YARQAN-E-SUDDI or Obstructive Jaundice into four types viz.

(a) YARQAN SUDĐAH KABID i.e. obstructive jaundice due to obstruction in the liver itself.

(b) YARQAN SUDDAH MARARAH i.e. jaundice caused by obstruction in the gall bladder.

Address: *Head, Basic Sciences,*
State Takmil-ut-Tib College, Lucknow - 226004

(c) YARQAN SUDDH MAJRAI SAFRA MUSHTARIQA or jaundice due to blockage or construction of the common bile duct resulting in the re-absorption of the body fluid SAFRA(Bile) in the blood.

(d) YARQAN QULANJI i.e. obstructive jaundice due to obstructions or blockage in the colon

Non-Obstructive Jaundice or YARQAN - E - GHAIR SUDDI

According to the Unani point of view has been classfied into the following types:

(i) YARQAN SUE MIZAJ KABID-meaning thereby that this type of jaundice is due to the abnormal change in the MIZAJ (temparament) of the liver. The liver has been termed as **Kitchen of the Body** by Unani physicians.

(II) YARQAN MUTADDI i.e. Infective Jaundice caused by excessive production of safra in the liver which intermingles in the blood stream producing signs and symptons of jaundice.

(iii) YARQAN BOHRANI-This type of non-obstructive jaundice is caused because of lysis during fevers like Malaria and Typhoid.

GENERAL SIGNS & SYMPTOMS OF JAUNDICE

Much has been contributed by anceient Unani physicians towards the symptomatology of jaundice. The main symptoms described in the Unani classics are being given here in brief. In the early stage of the disease the patient complains of anorexia, has disliking for foods etc. associated with Nausea and Vomitting with headache,mild fever and general restlessness.

In the later stage of Yarqan there is tenderness of the liver and then the patient gradually starts getting on jaundice such as yellow coloured urine.Then the fever subsides and patient also develops apetite for food etc.

DIAGNOSIS

The diagnostic process in the this system of medicine is dependent on observations and physical examinations. Special emphasis is laid on diagnosing a disease through NABZ (Pulse), physical examination of BOL (Urine) and BARAZ (Stool). Though the diagnosis of this hazardous disease in very easy but because of various types of jaundice, confirmation of the particular type of juandice is only made through differential diagnosis . This is of Utmost importance for treating cases of a particular type of jaundice.

The details by which differential diagnosis are made is based upon the signs and symptoms of the different kinds of jaundice. They are being discussed as under.

In obstructive jaundice due to obstruction in the liver, besides the general signs and symptoms of jaundice there are signs of obstruction e.g.,heaviness in the region of the liver . The colour of urine & stool is white or colourless and usually there is no fever.

In obstructive jaundice caused by obstruction in the gall blader,there is mild temperature with mild heaviness in the hepatic region. Other symptoms include bilious vomitting, bitter taste in the mouth, characteristic of SAFRA and severe restlessness. In obstructive jaundice due to constriction of or blockage of the common bile duct the colour of the stool turns white but there is no bilious vomitting

In obstructive jaundice due to inflammation or obstruction in colon caused by BALGHAM (Phlegm) the secreted SAFRA (Bile) is not able to trickle in the instestines causing jaundice.

In Non-obstructive Jaundice caused by the change in the mizaj of the liver, the patient complains of excessive thirst, anorexia and dryness of the tongue.Beside bilious vomitting, there is yellow coloured urination whose frothy portion on the upper level of urine kept in a vessel is also yellow. The skin of the pateint is also warm to touch. In infective jaundice or YARQAN MUTADDI there is inflammation and tenderness of the liver which is of bilious type presenting early symptoms such as yellow coloured urination with yellow skin specially of the face. Tongue is also slightly yellow. There is also bilious vomitting and mild degree rise of the body temperature.Taste of the mouth is bitter. In YARQAN BOHRANI caused by malaria and typhoid there are signs and symptoms of these fevers together with other general signs and symptoms of Yarqan. YARQAN SAMMI is caused usually by the sting and bite of poisonous animals or intake of toxic matter. Such patients present signs and symptoms of sting and bite and signs of poisoning by the toxins. Besides, the patient complains of stomachache,restlessness. There is also excessive thirst. The patient's face turns red and foul smell emits from his mouth.

MANAGEMENT

Here management of non-obstructive jaundice is briefly discussed. In treating cases of Yarqan Ghair suddi. (non-obstructive jaundice) due to abnormal change of the temperament of the liver. Shikanjebeen and juice of pomegranate helps in reducing temperature of the liver reposible for the abnormal change of the temperament of this organ. Besides this, the increased level of bile is also drained out from the body with the help of decoctions prepared from *Terminalia chebula* (Halela) and *Convolvulus seammonia* (Saqmomia) Aabe Mako or water of *Solanum nigrum* is also helpful. In cases of YARQAN MUTADDI or infective jaundice water of *Cichorium intybus* (Aab Kasni) *Solanum nigrum* (Aab Mako) shikanjabeen or juice of pomegranate and syrup of mint (Pudina) is given. Besides internal applications for reducing enlargement and inflammation of liver is also advised.

For YARQAN SAMMI (Toxic jaundice), Jawarish Jalinoos, Tiryaq Kabir, Famous Unani formulations are extremely useful. Juice of pomegranate and *Cichorium intybus*, Luabe of Isaphghol (*Plantago ovata*) With water of *Portulaca oleracea* (Aab Khurfa) and *Cucurbita legenaria* (Aab Kadu) and water of *Citrullus vulgaris* (Aab Tarbooz) are also beneficial.

In addition to the above treatment, the system of medicine lays great stress on certain Do's and Dont's. The patient is advised not to consume fatty diets and alcohol and to avoid stress and strain. The patient is advised complete rest in bed with plenty of fruit juice specially of pomegranate, Aloo Bokhara *(Prunus domestica)* and grapes,soft pulpy and boiled vegetables, easily digestible are recommended as food stuff. Sogodana and barley water are specially advised as diets for patients of juandice.

REFRENCES

1. Ibn Sina. Al - Qanoon fil Tib' translated by Ghulam Husain Kastoori, Lucknow 1933.
2. Abu Bakr Mohd Bin Zakariya Al-Razi Al-Have Dairatul Marif, Osmania university Hyderabad. Vol VII, 1958
3. Mohd Kabiruddin "Tarjuma Sharah Asbab" Vol II, 1960
4. Mohd Azam Khan Aksire Azam Vol II, 1960
5. Rabban Tabri "Firdaus ul Hikmat"
6. E.C. Warner "Savil System of Clinical Medicine" IV Edition, 1964
7. John Maclorad "Davidsons Principles and Practice of Medicine" 1979.
8. Sir Ronald Bodley Scott " Price's Text Book of Medicine " XII Edn.,1968
9. Varley Harold " Practical Clinical Chemistry" IV Edn., 1967

Ayurvedic Management Of Kamala

Prof. Raj Kishore Mishra

Kamala is one of the common diseases and its occurence has been observed throughout ages . In recent decades it has been found in Janpadodhwansa (Epidemic) form. In this disease there is vitiation of Rakta and Mansa- Dhatus caused by various factors. Doshaj Dushti due to Ahar, Vihar or other Psycological factors produces Pitta Vriddhi. This Pitta Vriddhi is so much in intensity that it colours the conjuctivae, oral or other mucous membrane skin and nails. Patients come with complaints of loss of appetite, constipation general weakness, fatigue, fever with yellow colouration. When patient is examined, the tenderness is observed over the abdomen or right hypochondrial region and liver is felt enlarged on palpation. Stools and urine are dark yellow in colour. Blood shows raised serum bilirubin and when there is Avarodh or obstruction, stool is clay coloured istead of yellow colour. Clinically it has been observed under the following headings.

(1) Kosthashakhashrita Kamala

(2) Ruddhapatha Kamala.

So far as Sadhyta or Asadhyta is concerned, Kamala is an easily curable disease if diagnosed early and treated properly. Delay or irregular treatment or negligence either on the part of the patient or physician converts this disease into chronic state and disease becomes diffifult in treatment and sometimes even Asadhya (Incurable).

Chikitsa Siddhant (Line of Treatmment):-

As Pitta is main factor in producing Kamala due to damage or derangement in the Rakta Nirmana (blood formation) sites, therefore the symptoms are mostly of Pittavridhee. Therefore during the course of treatment, Sanshodhan of Pitta and proper functioning of Rakta Nirman has been preached. Therefore Pitta from Shakha has to be brought to Kostha and that Koshthashrita Pitta should be expelled out from the Pachyamanashaya or Amashaya (Stomach). For this purpose, in Kamala Virechan has been advocated. As Clinically without Snehan Virechen is not possible, therefore Snehan Chikitsa, that too with prepared Ghritas such as Panchagavya Ghrita, Dadim Ghrita, Mahatikta Ghrita. Kalyan Ghrita, Katukadya Ghrita and any other Ghritas where Nutmeg and Kutaki or Trivrita have been main contents in the decocation, can be used

Address : *State Ayurvedic College & Hospital, Turiaganig Lucknow - 226004*

as per Snehan vidhi i.e. 3 days, 5 days or 7 days. After this Snehan, Virechan has to be performed.It is to be noted here that Swedan has never been advised in this disease.

Virechan:

For this purpose Danti or Nutmeg or Trivrita or Nishoth are used as per Virechan method. If Mridu Virechan is required then Milk with Gomootra (Urine of cow) or Haritaki is to be given. After proper sanshodhana in Pancha Karma, dietetic adjustment is made. In this process old Sathi rice, Moong, Masoor are used in the form of Manda, Peya, Vilepi and Krishara as per rule.

Medicines:

In early morning any one of the following can be used.

(1) Juice of Triphala.

(2) Juice of Guduchi.

(3) Juice of Daru haridra.

(4) Juice of Leaves of Neem

Medicines like Yogaraj Rasayan,Arogyavardhini Vati, Punaranava Mandoor, Praval Panchamrita, Dhatri Lauh,Swarn Soot Shekhar Ras, Kamalanatak Ras, Sindoor Bhushan Ras or other medicines could be given. Phalatrikadi Kwath or Pathyadi Kwath may be given. Any one of the following should be prescribed after food such as Gaudarishta, Beejakarishta Dhatryarishta, Abhayarishta or Kumari Asawa.

Bhumyamalaki is quite effective and its powder preparation 'Bhuma' prepared and processed at State Ayurvedic college, Lucknow is given 2 tablets three times a day.

Many Ayurvedic Pharmacies are preparing number of medicines which are quite effective. Among them Kinotomine, Herbitors, Liv-52 etc. are extensively used.

Dietetic management:

It is always safe to put the patient on fat free liquid diet and preparations of Madhur Ras are preferred. The following substances are encouraged in diet.

Juice of Radish, Juice of Kakamachi (solanum nigrum) pomegranatee Sugar,caneJuice,Lemon Juice, Madhuyashti,Parval, Torai, Separated Milk, Old Sathi Rice,Moong and only unfired food should be taken.

The Sanyogark, Vishaladi Fant, decoction prepared by Laghu Panch Mool, Decoction prepared by Amalaki Juice or boiled water are preperred as drinks.

Acknowledgement: -

I acknowledge my gratitude to the Principal State Aurvedic College, Lucknow for permitting me to submit this paper. My thanks are to my Post Gradute scholor Dr. Naimish Raj Singh, and my resident Dr. Ranjana Chaturvedi in preparing this article.

References:

(1) Charak Samhita Hindi Commentary by Sastri K.M. and Chaturvedi G.N. 13th Edition 1986 Chau Bharati Academy Varanasi of II Chikitasa Sthan Chapter No. 16

(2) Sushruta Samhita Hindi Commentary by Atrideva. Motilal Banarasidas- Delhi Uttar Tantra. Chapter No. 14

(3) Bhaishajya Ratnawali: Vd. Govind Das.

(4)) Bhava Prakash commentary by Shri Lala Shaligram Vaishya. Shri Venkateshwar Printing Press Bombay, Madhya Khand Chap. No. 8

(5) Ashtanga Hridaya Hindi Commentary by A. D. Gupta Chau. Sans. Series Varansi. Nidan Sthan Chaptor No. 13.

(6) Dr.Prabha Sinha - Ph.D. Thesis Institute of Technology B.H.U. Varansi.

KAMALA : The Ayurvedic Concept

According to the Sanskrit root the word Kamala means the thing which may not give satisfaction for sense organs *(kamam na lathiithi)*, according to Ayurveda it is the disease of the circulatory system. In this context one has to think about spleen & liver too.

Classification

Ayurvedic classification is as follows :

According to the location :

a) Ruddhapatha (obstructive) : Due to the obstruction in the passage of Pitta Srava by gall stones or growths.

b) Koshtasraya (systemic- includes both hepatic and haemolytic) : Due to the vitiation of Pitta.

According to Nidana:-

a) intake of vitiated breast milk

b) intake of toxic food

Epidemic

According to the subject affected :

a) Garbhini Kamala (pregnancy jaundice)

b) Saishava Kamala (neonatal jaundice-for infants this may occur soon after birth).

Nidana (causative Factors)

Samanya (General)

1. This may cause as epidemic because of pollution of environment (air,water, place, poisonous and cruel animals,dusty wind,horrible noises etc.,) and time (by improper seasonal variations like drought or flood etc)
2. Foods those vitiate Pitta & Rakta.
3. Intake of impure alcohol,adulterated food & drinks.

4. Worm infestations.
5. Diseases of liver, gall bladder & spleen.

Saisava Kamala (Infantile jaundice).

1. Breast milk vitiated by PITTA.
2. Worm infestations.
3. Intake of poisons & incompatible foods (like fish and milk or equal quantities of honey and ghee etc., simultaneously)

Lakshanas (signs & Symptoms)

Poorvaroopa (Prodromatic)

1. Lack of appetite
2. Tastelessness
3. Fever
4. Vomitting
5. Yellowih discolouration of Eyes, Urine & Stools.
6. Aversion towards breast milk or milk.
7. General weakness.

B. Samanya(General)

1) Fever.
2) Vomitting.
3) Pain or burning sensation in stomach.
4) Tastelessness.
5) Itching of body.
6) Pain on sides of chest.
7) Difficulty in breathing & hicough.
8) Excess thirst.

C. Vishesha (Specific)

At first vomitting sensations,running temperature and lack of appetite will become evident. After this, yellowish discoloration of Eyes & Urine developes. If untreated, these signs may increase,along with prominent discolouration of Stools. Then the general weakness increases pain and burning sensation of stomach appears, thirst becomes severe.

D. Asadhya Lakshana (Incurable Signs & Symptoms)

1. Watery loose motion, yellowish, blackish or greenish discolouration of Stools.
2. Frequent micturition with less quantity of urine & burning

sensation.

3. Swelling on whole body.
4. Belly becomes enlarged and hard to touch.
5. Severe body pain especially on abdomen.
6. Frequent attack of giddiness which ultimately leads to coma.

E. Arishta Lakshana (Signs And Symptoms Indicate Likely Death)

1. Bleeding through nose,urinary pathways and anus.
2. Frequent attack of unconsciousness.
3. Coma.

F. Upadrava (Complication)

1. Stomach ache.
2. Giddiness.
3. Itching on body.
4. Burning in the stomach.
5. Excess thirst.
6. Vomitting.

Differential Diagnosis

(Difference in Ruddhapatha and Koshtasraya Kamala)

Ruddhappatha	Koshtasraya
1) White stools like soil or sesam seed paste.	1) Stools yellow or green.
2) Yellow urine	2) Yellow urine.
3) Yellowish discolouration of skin and nail.	3) Pale or yellow discolouration of skin.

Test for Kamala (Traditional method)

Put some cooked or raw white variety of rice in the patient's urine and allow to stand for about two or three hours. Yellowish discolouration of rice indicates jaundice.

Treatment Procedures

A) Line of treatment

1. The type of Kamala (Ruddhapatha or Koshtasraya) is confirmed

and the line of treatment has to be decided accordingly.

2. As the main causative factor being the **vitiation of Pitta**, the whole treatment should be aimed to **reduce** the increased pitta. In obstructive type the treatment should be aimed on to the lekhana (scraping of the obstructed hard substance along with the above procedure). In unobstructed case slight **Virechana** can be performed for early 2-3 days.

A. 1) Treatment for accompanying symptoms

1. In case of itching the leaf juice of Neem or Karanja are applied.
2. In severe thirst, chewing of sugarcane or decoction of coriander seeds are helpful or one teaspoon of black ash of Banyan tree mixed with the above mentioned water (see 6).
3. In excessive burning sensation,the juice of tender inner stem of plantain is given for drinking.
4. In hiccoughs,smoke of coconut fibre is introduced.
5. In excessive burning sensation in the stomach,give one table spoon of black ash of Amalaki by burning it.

B. Some Traditional Treatments.

B.1) Koshtasraya

1. Dried ginger mixed with cow's milk is taken.
2. Give the leaf juice of Guduchi,leaf juice of Neem, leaf juice of castor and Kashaya of Triphala. This is done in non-obstructive type. In yellow discolouration of urine purgation should be done with castor oil.
3. Half cup of raddish juice will change the discolouration of stools.
4. 1/2 spoon of turmeric powder with honey is given in discolouration of stools.
5. Paste of *Phyllanthus niruri* taken in a size of goose berry mixed with cow's or goat's milk is given for 3 days on empty stomach in the early stages.
6. The paste of tender castor leaves, with 3 pinches of cumin seed is given in the size of 1 1/2 goose berry, empty stomach for 3 days in the early stages.

B.2) Ruddhapatha

1. The mixture of dried ginger and jaggery (each 10 gm) is given.In burning stomach it is contra-indicated.
2. In white stools half cup of the paste of leaf of Guduchi and one cup of butter milk is given.

3. Intake of cow's urine is good in early stages of obsructive jaundice.

Precautions

1. After 7 days of treatment if the condition worsens,the patient should immediately be referred to an experienced physician.
2. Never treat a Kamala patient if he has advanced to the state of coma, unconsciousnes or shows the incurable signs, refer such case to an expert.
3. Patient should be protected from direct sun light and wind.
4. Hot food should be avoided.
5. Avoid alcoholic drinks,tea,coffee etc.
6. Avoid tastes like pungent,salt and sour.
7. Complete rest should be taken.
8. Water (boiled & filtered) in which a bunch of clean Neem leaf is kept and is given for drinking & mouth wash.
9. At the early stages (6-7 days), if the patient follows certain restrictions in food and other habbits,the disease will not aggravate to an advanced stage. During and after relief(medicines given as Rasayana), different type of restrictions are advised.
10. The substances like rice, cabbage, patol, green gram, mosamby, sugarcane, pomegranate, fresh turmeric, black grapes, sweet grapes, and sugarcane juice can be used as food.
11. The patient should observe complete rest and purgation can be introduced according to the need.
12. Apart from all above things,the diet and routine which increases Pitta should be avoided (Ushna Dravyas like chilly, sesam seed & oil etc.) and which will reduce pitta should be followed (intake of Seeta Dravyas like coconut water, grapes etc.). These restrictions will enhance effect of the medicine.

Convalescent Care

Following Rasayanas are helpful for general health, especially for the proper functioning of liver and spleen.

1. Fresh turmeric juice one table spoon + 1 cup of cabbage juice,once a day for 3 weeks.
2. 1 cup of butter milk mixed with a little of cumin seed,coriander,rock salt and asafoetida to be taken after meals twice a day.

3. Soup prepared from goat's liver and dried meat to be taken at bed time.
4. Instead of water, tender coconut water,the water boiled with the root of Udumpara tree or neem tree,the laja water is also advised.
5. The Payasam (Kheer) prepared with Sringataka, seed of lotus and Thugaksheeri is taken after lunch.
6. Frequent use of Pomegranate is advised.
7. Milk boiled with dried ginger to be taken daily once.
8. Carrots are advised after boiling.
9. A mixture of ginger,green coriander, mentha leaves & coconut is ground and taken along with meals.
10. In obstructive type Silajatu can be used after purification.

Botanical Identity, Chemical Constituents And Pharmacology Of Some Important Herbs Used In Jaundice: A Literary Approach

Shaik Imam, M.A. Mirza, Khatoon B, Guta V.C. & Ahmed Manzoor.

Jaundice (Yarqan), the hazardous liver disorder generally prevails during monsoon season in the form of epidemics, particularly in Unhygienic circumstances and causes great loss to the diseased persons. There is no perfect remedy for this disease. However it is of interest to know that herbal remedies, than the synthetic drugs, have always been ahead in the curative aspect of the disease. A Number of herbal medicines have been described for Jaundice in the Unani classics since the times immemorial. In addition to these herbal drugs available in the literature, there are some herbs being used by tribals of the interior tribal pockets for the treatment of jaundice with considerable good results. Perfect knowledge of the herbal drugs will aid the physicians in the selection of suitable drugs for patients with different temperaments. In the present article the botanical identity, temperament, chemical constituents, actions and method of administration of ten important herbal drugs mentioned in the Unani classic and another five folk-herbal remdies for jaundice collected from the tribals of different forest divisions of Andhra Pradesh have been thoroughly discussed.

The herbal drugs described in the present context are as followes:

Bishkhapra	(*Trianthema portulacstrum* Linn.)
Gul-e-Surkh	(*Rosa damascena* Mill).
Kasni	(*Cichorium intybus* Linn.)
Kasus	(*Cuscuts reflexa* Roxb.)
Mako	(*Solanum nigrum* Linn.)
Muli	(*Raphanus sativus* Linn)
Nagar motha	(*Cyperus rotundus* Linn.)
Nilofar	(*Nymphae rubra* Linn.)
Revand chini	(*Rheum emodi* well)
Turanj	(*Citrus medica* Linn.)

Address: *Central Research Institute for Unani Medicine, Hyderabad-500038.*

Folk - Herbs For Jaundice

Bhui Amla	*(Phyllanthus niruri* Linn.*)*
Belphal	*(Aegle marmelos corr.)*
Lajwanti	*(Mimosa pudica).*
Karanjwa	*(Caesalpinia crista* Linn.*)*
Palaas	*(Butea monosperma* (Lam) Kun

BISHKHAPRA

Botanical name	:	*Trianthema portulacastrum* Linn.
Syn:		*T. monogyna* Linn.
Unani Name	:	Bishkhapra
Local Name	:	Galiejru
Habitat and Distribution	:	Throughout India.
Botanical description	:	Diffuse prostrate branched herb. Leaves petioled, opposite, unequal, entire. Flowers solitary, sessile, sheathed by the base of the petiole. Fruit is a capsule. 3-5 seeded.
Parts used	:	Leaves.
Temperament	:	$Hot2^0$ & $Dry2^0$
Chemical constituents	:	Saponin, punarnavine.
Actions	:	Anti-inflammatory, analgesic, alternative.
Dosage and method of Usage	:	50 grm. leaf juice., twice-daily for 15-20 days.

GUL-E-SURKH

Botanical Name	:	*Rosa damascena* Mill
Family	:	Rosaceae.
Unani Name	:	Gul-e-Surkh.
Local	:	Gulabi
Habitat and Distribution	:	Cultivated all over India.
Botanical description	:	An erectprincelyshrub, branches long. Leaflets usually 5 - some times 7. Ovate-oblong serrate. Flowers usually corymbose, red, pink, sepals deciduous, Reflexing during flowering time, fruit obovate.

Parts used	:	Flowers.
Temperament	:	Cold
Chemical constituents	:	Essential oil, bitter principle, tanning matter, fatty oil and organic acids.
Actions	:	cooling, astringent, aperient, removes the bile and cold humours.
Dosage and method of Administration	:	Rose water and Gulqand 20-25 gm. thrice daily for a period of 12-15 days.

KASNI

Botanical Name	:	*Cichorium intybus* Linn.
Family	:	Compositae.
Unani Name	:	Kasni
Local Name	:	Kasni
Habitat and Distribution	:	Wild in Punjab, N.W.Frontier province and Hyderabad (D.N.) cultivated in Nadiad, Broach and Amalsad in Bombay.
Botanical description	:	An erect perennial herb. Stems augled lower leaves pinnatified, lobes toothed. Upper leaves entire. Flowers in heads. Flowers bright blue. Fruit is acheme.
Parts used	:	Leaves, roots and seeds.
Temperament	:	Leaves : Hot1^0 and Wet2^0
Chemical constituents	:	Cichorin, Lactucin, Intybin.
Actions	:	Tonic, antipyretic, anti-emetic, stomachic and diuretic.
Dosage & method of usage	:	Infusion of 50 gr. seeds is useful in obstructions or torpor of the liver and in checking bilious enlargement of the spleen.

KASUS

Botanical Name	:	*Cuscuta reflexa* Roxb
Family	:	Convolvulaceae
Unani Name	:	Kasus; Akashbel.
Local Name	:	Sitamma pogunalu.

Habitat and Distribution	:	A parasitic climber common throughout the plains of India, ascending the hills upto 8,000.
Botanical Description	:	A leaf-less stout branched yellowish parasitic herb. Flowers small, white. Fruit is a capsule.
Parts used	:	Stems.
Temperament	:	Hot1^0 & Dry2^0
Chemical Constituents	:	Cuscustalin and cuscutin - Alkaloids.
Actions	:	Anti-bilious.
Dosage and method of Usage	:	50 gm infusion of the stems is given orally.

MAKO

Botanical Name	:	*Solanum nigrum* Linn
Family	:	Solanaceae
Unani Name	:	Mako
Local Name	:	Kamanchi,
Habitat and Distribution	:	Throughout India, upto 9,000's in the West Himalayas.
Botanical Description	:	Annual herb, leaves thin, glabrous, ovate, lanceolate, entire, alternate. Flowers in cymes, white berry globose, black sometimes red or yellow, shining, seeds discoid, minutely pitted.
Parts used	:	Leaves.
Temperament	:	Cold2^0 and Dry2^0
Chemical constituents	:	Solanine and Saponin - Alkaloids.
Actions	:	Hydragogue, Cathartic, Diuretic, Anti-inflammatory, given in the chronic enlargement of the liver and cirrhosis.
Dosage & method of Administration	:	Freshly prepared fluid extract from the leaves (10-25 gm) given orally for 15-20 days.

MOOLI

Botanical Name	:	Raphanus sativus Linn.

Family	:	Cruciferae.
Unani Name	:	Shurb
Local Name	:	Mullengi
Habitat and Distribution	:	Cultivated all over India upto 16,000
Botanical description	:	A small herb roots white leaves cauline oblong.
Parts used.	:	Roots and seeds.
Temperament.	:	Roots/seeds Hot2^0 and Dry2^0
Chemical constituents	:	Enzyme and methyl mercaptan.
Actions.	:	Diuretic, laxative, lithontryptic, emmenagogue, antiscorbutic, antibilious.
Dose and method of Administration	:	50 gm powdered roots with 10 gm powdered seeds are given twice daily for 10-15 days

NAGAR MOTHA

Botanical Name	:	*Cyperus rotundus* Linn
Family	:	Cyperaceae
Unani Name	:	Saad koofi
Local Name	:	Tungamuste.
Habitat and Distribution	:	Throughout India, common in Waste grounds, gardens, and road sides in open spots and upto an elevation of 6,000′
Botanical Description	:	Annual or perennial erect herb, leaves usually radical compound. Flowers in spikes, spikelets linear to lanceolate.
Parts used	:	Tubes or bulbus roots.
Temperament	:	Cold2^0 and Dry2^0
Chemical constituents	:	Pinene, cineole, Sesquiterpenes, and Iso-cyperol.
Actions	:	Diuretic, emmenagogue, aphrodisiac, antipyretic, appetizer,
Dose and method of Administrations	:	Juice of 50 gm roots are given for a period of 5-10 gays.

NILOFAR

Botanical Name	:	*Nymphaea rubra* Linn.
Syn	:	*N. lotus* Linn.
Family	:	Nymphaeacea
Unani Name	:	Nilofar.
Local Name	:	Erra Kaluva.
Haabitat & Distribution	:	Throughout warmer parts of India.
Botanical Description	:	Root stock tuberous, short, erect, leaves peltate, orbicular or reniform deeply cordate at the base. Flowers solitary, red, pale rose or white open in the morning times. Fruit fleshy globose, green,ripening beneath the water.
Parts used	:	Flowers.
Temparament	:	Cold2^0 and Wet3^0
Chemical constituents.	:	Flowers contain nymphalin, nupharine and two alkaloids showing sedative action in small doses.
Actions	:	Flowers are acrid, cooling, blood purifier and anti-bilious
Dosage and method of Administration	:	A syrup of the flowers to be made with 1 ounce of sugar and 5 ounces of water is used orally for 10-15 days.

REVAND CHINI

Botanical Name	:	*Rheum emodi* wall
Family	:	Polygonaceae
Unani Name	:	Revand chini.
Local Name	:	Natturevelchinni.
Habitat and Distribution	:	Sub-alpine and alpine Himalayas upto 11,000- 12,000 ft.
Botanical Description	:	A stout herb with woody large roots. Radicle leaves, long petioles very large, orbicular or broadly ovate flowers in panicles. Fruits ovoid - oblong.
Parts used	:	Root.
Chemical constituents	:	Rhein, emodin,

Actions	:	Anti-bilious alexitenic, purgative, emmenagogue and diuretic.
Dosage and method of usage :		50 gm root powder.

THURANJ

Botanical Name	:	*Citrus medica Linn*
Family	:	Rutaceae
Unani Name	:	Turanj.
Local Name	:	Lungamu.
Habitat and Distribution	:	Cultivated throughout the warm moist regions of India. Wild in Chittagong, Sitakund Hills, Khasis.
Botanical Description	:	A small tree. Leaves elliptic oblong, petioles winged, flowers axillary, solitary or in cymes, fruit is a large berry oblong or globose.
Parts used	:	Rind of the fruit.
Temperament.	:	Cold3^0 and Dry3^0
Chemical constitutents	:	Limonene, dipentene, citral.
Actions	:	Aromatic, stimulant, anti-inflamatory, tonic and anti-scorbutic.
Dose and method of dosage	:	Powder of 50-75 gm rind to be given owally for 10-15 days.

FOLK MEDICINES

BELPHAL

Botanical Name	:	*Aegle marmelos* Corr
Family	:	Rutaceae
Unani Name	:	Belphal.
Local Name	:	Maredus
Habitat and Distribution	:	Wild in sub Himalayan tract, central and southern India, often planted all over India.
Botanical Doscription	:	A small deciduous thorny tree leaves usually glabrous gray, pungent gruit globose.
Parts used	:	Leaves
Temperament.	:	Hot1^0 Dry2^0

Chemical constituents	:	Marmalosin, α-and-β-phellanrene.
Actions	:	Leaves are anti-inflammatory and anti-bilious
Dose and method of Administration		Fresh juice of the leaves (5-10) with 2 gm black pepper powder to be given orally for a period of 15-20 days.
Place and date of collection	:	Adilabad, December 1985

BHUI - AMLA

Botanical Name	:	*Phyllanthus niruri* Linn
Family	:	Euphorbiaceae
Unani Name	:	Bhui amla.
Local Name	:	Nelavusari.
Habit and Distribution	:	Throughout the parts of India from Punjab to Assam and Southwards to Travancore, ascending the hills upto 3,000′
Botanical Descripation	:	A branching annual herb reaching 12-18′ high, leaves small, alternate, distichous, the branchlets resembling pinnate leaves. Flowers very small monoecions, ovary 3-celled. Fruit is a capsule with 3 crustaceous cocci, seeds trigonous.
Parts used	:	Root and whole plant.
Temperament	:	Hot 1^0 & Dry 1^0
Chemical constituent	:	Phyllanthin, and hypophyllanthin.
Actions	:	Remedy for Jaundice.
Dosage and method of Administration	:	5-10 gm of plant including roots is to be grinded and the powder to be given orally 2-3 times daily for a period of 15-25 days.
Place and date of collection	:	Adilabad, December, 1985.

KARANJAVA

Botanical Name	:	*Caesalpinia crista* Linn
Syn	:	C. bonducella Fleming
Family	:	Caesalpiniaceae.
Unani Name	:	Gachakaya.

Habitat and distribution	:	Introduced in India and almost acclimatized in S.India and cultivated in Dharwar, Belgaum, and Kanara.
Botanical description	:	A large straggling very thorny shrub with yellow flowers. Leaves with large foliaceous pinnate stipules, leaflets elliptic, oblong pod covered with wiry prickles.
Parts used	:	Leaves and seeds.
Chemical constituents	:	Bonducin, Phytosterinin, Saponin and Phytosterols.
Actions	:	Anti-inflammatory, antipyretic, tonic emmenagogue.
Dose and method of Administration	:	The leaves (5-10) and the seeds (5-10) are to be grinded with jaggery and the paste is to be given orally 2 - 3 times daily for a period of 15-20 days.
Place of collection	:	Jadcherla. 23-07-1987

LAJWANTI

Botanical Name	:	*Mimosa pudica* Linn
Family	:	Mimosae.
Unani Name	:	Lajwanti.
Local Name	:	Attapatti.
Habitat and distribution	:	Through India.
Botanical description	:	A diffuse under shrub with very sensitive leaves, pinnae of the leaves 1-2 pairs, digitately arranged. Flowers Pinx, pods bristly.
Parts used	:	Roots.
Temperament	:	$Cold2^0$ and $Wet2^0$
Chemical constituents	:	Mimosine.
Action	:	Anti - inflammatory, and used in liver disorders.
Dose and method of Administration	:	Root decoction is to be given orally with 2 gm black pepper twice daily for a period of 15-20 days.
Place and Date of collection	:	Adilabad

PALAAS

Botanical Name	:	*Butea monosperma* (Lam) Kuntze
Syn :		*B. frondosa* Koen ex Roxb
Family	:	Papilionaceae
Unani Name	:	Palaas; Tesu ; Dhak.
Local Name	:	Moduga.
Habitat and distribution	:	Common throughout the greater part of india upto 4,000′ except in very arid parts.
Botanical description	:	A decidious tree, leaves pinnately 3-foliate, leaflets large flower large, red and commonly known as Flame of the forest, pod an oblong follides with a single apical sead. Seeds obovate, compressed, hilum small.
Parts used	:	Flower and Bark
Temperament	:	Cold and dry
Chemical constituents	:	Glucosides, Proteolytic and lipolytic enzymes.
Actions	:	Astringent, diuretic, anti-inflammatory, anti-bilious, used in liver disorders.
Method of adminstration	:	Powder of the bark (5-10 gm) with flower Pulp (5- 10 gm) to be mixed with honey and given orally for a period of 10 - 15 days
Place and date of collection	:	Kavarampet.

DISCUSSION : Generally it was considered that the plants with anti - inflammatory and anti - bilious properties are potent in curing jaundice. The herbs mentioned in the present article are having either anti-inflammatory or anti-bilious actions. Pharmacological and clinical studies should be conducted on these drugs so that actual action and efficacy of the drugs in the treatment of jaundice be established.

REFERENCES

The Wealth of India, 1982 Vol.I-XI(CSIR, New Delhi)

Chopra, R.N., Nayar S.L.& Chopra, I.C. 1985 : Glossary of Indian medicinal plants (CSIR, New Delhi).

Gamble, J.S. (1928) : Flora of the presidency of Madras Vol. I-III. (Authority of the secretary of the state for India in council).

Kabeeruddin M (1948) : Kitabul Advia part II. (Daftar - al Masih, New Delhi.)

Kirtikar, K.R. & Basu B.D. (1982) : Indian Medicinal plants, vol. IV, (Bishan singh, Mahendra pal singh, Dehradun.)

Mohd. Azam Khan(1305 H): Mohit-e-Azam, Nizamia Publishers, Kanpur.

Nadkarni, K.M. (1976) : Indian Materia Medica (Bombay, Popular Prakashan).

Syed Safiuddin Ali (1986) : Unani Advia Muffaradah, (Taraqqi; Urdu Bureau, New Delhi).

Jeevaniya

Bimonthly

Health Care Magazine

हर मौसम में स्वस्थ रहने
के लिए नियमित
पाठक बनें

जीवनीय, ई-III/250, सेक्टर एच
अलीगंज, लखनऊ - 226020

Jeevaniya, E III/250, Sector H
Aliganj, Lucknow - 226020

Abstracts Index

A. I. 1

Pathophysiology Of Jaundice : A Modern Viewpoint

Dr. Raj Mehrotra

Jaundice in a clinical state characterised by yellow discolouration of skin and mucous membranes associated with an increase in the bile pigment (bilirubin) concentration in blood. The effects produced by jaundice are kernicterus in newborns, pruritis due to retention of bile salt, impaired vitamin K and fat absortion. Nearly 90% of bilirubin is derived from effete RBCs, while a minor portion is derived from non erythroid sources(bone marrow, liver, cytochrome, myoglobin). Bilirubin is liberated by reticuloendothelial cell into plasma, tightly bound to albumin. The liver cells play a major roll in bilirubin matabolism, and three phases are recognised (a) hepatocyte uptake of bilirubin (b) conjugation with glucoronic acid and (c) excretion of conjugated bilirubin in bile. The intestinal phase of bilirubin metabolism consists of bacterial action leading to its conversion to urobilinogen, some of which is reabsorbed while the majority is oxidised to stercobilin and is excreted in faeces. The major bulk (75%) of faecal urobilinogen from intestines is again excreted by liver in faeces, while the rest (25%) passes in urine as urobilinogen which becomes oxidised to urobilin. Jaundice results due to overproduction of bilirubin or an interference at its hepatocyte uptake or intercellular meatabolism or in conditios which are associated with impairment of bile excretion. Jaundice can be clinically classified as hemolytic(pre-hepatic), hepatocellular (hepatic) and obstructive (post-hepatic, surgical). Based on pathogenesis , it can also be classified as retention and regurgitant types. The cause of hemolytic jaundice include icterous neonatorum,hemolytic anemia(congenitial and acquired), mismatched blood transfusion and drugs. The hepatocellular jaundice is mainly due to hepatitis viruses (A,B,C,D,E) and toxic agents(drugs), while the obstructive type results due to an intra/extrahepatic biliary obstruction. Besides these, in a small group of patients certain inborn errors of bilirubin metabolism might also result in a familial non-hemolytic jaundice. This can be clasified as - unconjugated hyperbilirubinaemia which includes Gilbert, and Crigler Najjar syndrome. The conjugated hyperbiliruminia includes Dubin Johnon and Rotors syndrome.

Address : *Liver Pathology Unit, Department of Pathology, K.G. Medical College, Lucknow.*

A.I-2

Pathophysiology of Jaundice in Unani System of Medicine

Hkm. Altaf Ahmad Azmi

Jaundice is a disease characterised by yellowish discolouration of skin and eye etc, due to the flux of yellow bile (Khilt-i-Safra) or black bile (Khilt-i-Sauda) towards them. This abnormal condition occurs in the body either due to over-production of bile or blockage of the hepatic or common bile ducts by a stone or any other cause, as has been illustrated by Ibn Sina (1037 A.D), a great Unani physician, in his encyclopaedic medical work Alganun (vol. 3, p. 321).

The Subject would be dealt with in the paper in detail.

Address : *Senior Scientific Officer*
Department of History of Medicine and Science,
Faculty of Science
Jamia Hamdard, New Delhi - 110062

A.I-3

Clinical Evaluation Of Kamala In Ayurveda

Prof. C.B. Dubey

Kamala or Jaundice is such a disease which attracts the attention of the patient because he feels loss of appetite, no desire for food, wretching and weakness. He first marks the changed colouration of urine to Haridra. Sometimes he does not mark it but the relations or friends find the eyes yellow. Then the patient comes to physician for treatment and when the physician examines he finds the changed colour of face, nails; sometimes the body becomes yellow like the frogs of first rain (Bhake Varn). Then there is loss of function of sensory organs, patient feels extreme weakness gets easy fatigue and mild fever & depression. It has been divided mainly in two types:

(i) Swatantra

(ii) Paratantra

The other type of division is

Kosthashrit, Sakhasshrit and Ubhaiasthrita.

The symptology of the two are quite different. One can say the first is medical jaundice and the second surgical jaundice. The Sakhashrit has been told is due to obstruction by Kapha in Pittavaha Srotas*. The colour of the stool becomes like Tillpishtha (clay colour). There are so many other varieties of Kamala which have been described when the stage of Kamala is advanced i.e. Kumbha - Kamala, Halimaka & Panki etc. In these varieties, the sympotms are found too advanced. The symptoms described alongwith complications appear to be symptoms of malignancy. The detailed description with symptomatology and clinical evaluation are given in article.

* *HARIDRA NETRA MUTRA TWAKA SWETA VARCHAS*

CH CH 16 - (123-126)

Address : *Principal-cum-Superintendant*
State Ayurvedic College & Hospital
Turiaganj, Lucknow - 226 004

A. I. 4

Jaundice - Status Evaluation

Dr. S.R. Naik

The approach to a jaundiced patient is largely clinical with support from biochemical and imaging techniques in stepwise fashion. Pre-hepatic (haemolytic), hepatic (hepatocellular) and physical examination, routine biochemical liver function tests and abdominal sonography. Diagnosis of acute liver problem is usually easy using all these tests. Chronic liver diseases however may pose difficulties because minimal hepatocyte necrosis as evidenced by mildly elevated transminases and moderate elevation of serum alkaline phosphatase may occur in both hepatocellular and extra-hepatic causes of jaundice. Liver biopsy may help distinguish between these cases in some but not all cases. Further tests such as other imaging tecniques and cholangiography may be needed for such cases.

Address : *Professor of Gastroenterology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow.*

A.II-1

Jaundice- A Survey On Knowledge, Attitudes And Practices Prevalent In Rural And Urban Communities.

Omkar P. Asthana, R.C. Srimal,W.F. Rahman, R.K. Sharma, S.K. Mandal & V.K. Srivastava

Jaundice in simplest way can be defined as yellowish discoloration of conjunctivae and skin with passage of mustard color urine. Contrary to common belief it is not a disease but a symptom giving reflection to a number of underlying disease states needing attention for intervention and it manifests so clearly that even a layman can recognise it. In view of these facts it becomes essential to understand the knowedge,attitude and practices prevalent in rural and urban communities for better understanding of factors which may infuence its course and outcome. Since data on this subject is lacking from Indian communities, therefore, the present survey was undertaken in rural and urban communities in Lucknow. A pretested and specially designed interview questionnaire was employed to survey a target population of 1000 subjects,500 each in rural and urban communties by trained and qualified persons.

So far,data collected after surveying 600 individuals (400 urban, 200 urban) have been computerised creating a 'JAUNDICE SURVEY DATA BASE (JSDB)'. The analysis of the data base using 'EPI-INFO' (USA) software package on IBM-PC has revealed interesting results which would be presented and discussed. The findings of the present study have relevance in developing appropriate startegy for better understanding of people's perceptions towards jaundice. This information may be useful in advocating health care management of jaundice in more acceptable,effective and economical manner. In the light of two recent outbreaks of jaundice epidemics in Kanpur and Lucknow, the present study carries higher significnace and may generate further interest amongst medical practitioners.

Address: *Central Drug Research Institute, Lucknow and Upgraded Department of Social & Preventive Medicine,King George's Medical College,Lucknow.*

A.II-2

Ayurvedic Management Of Jaundice

Dr. Bheema Bhat

Kamala or jaundice is one of the **Pitta** diseases characterised by yellowish colour in the body. It is due to raised bilirubin level in the blood. This may be due to infective damage of liver cells, haemolysis of the red blood cells or due to obstruction in the biliary tract. According to Ayurveda there are two types of **Kamala** viz., **Koshthashrita** and **Shakhashrita.** The main treatment of **Kamala** is to eliminate the excessive accumulated bile **(Mala Pitta)**, *to check the haemolysis and to remove the obstruction in the tract.*

In this study, 25 patients of *Kamala* irrespective of the age and sex were treated in Ayurvedic Department, Holy Family Hospital, New Delhi in IPD as well as in OPD level. 22 patients were suffering from **Koshthashrita Kamala** and 3 had **Shakshashrita Kamala.** Investigations, specially periodical blood examination for Serum Bilirubin direct & total, SGPT, SGOT, SAP, Hb% etc. were recorded in all cases.

In the treatment, **Bhumyamalaki Kalka, Arogyavardhini Vati, Punarnavadi Mandura, Kamalahar Ras, Phalatrikadi Kwatha** were given to all patients, Strict fatless diet was given. Out of 22 **Kosthashrita** cases, 21 recovered and out of 3 Shakhasrita cases one recovered. Hence Ayurvedic treatment for **Kamala** or Jaundice is very effective.

Address : *Ayurvedic Consultant*
Holy Family Hospital
Okhla Road
New Delhi-110 025

Clinical Management Of Jaundice: Scope Of Herbal Hepatoprotective Drugs As Adjuvant Remedies In Chemotheraphy Of Tuberculosis

R. H.Singh, B.N. Shetty and D.P. Dash

Liver is one of the most vital organs of the body. Most of the drugs and chemicals which are consumed as therapy or in diet are metabolised through liver. Hence liver is always exposed to the risk of chemical damage and progressive irreversible changes many a times leading to Jaundice and hepatic failure. Although most common causes of jaundice are viral hepatitis and obstructive pathology of hepatobliary system, the incidence of chemically induced jaundice is increasing fast due to the increasing use of chemicals as drugs and such other affections.Chemotherphy of Tuberculosis is one such common problem. Several commonly used antitubercular drugs like Rifampicin etc. are hepatotoxic and often lead to Jaundice .

The present communication deals with clinical evaluation of the hepatoprotective effect of some herbal drugs like Kutaki, Kalmegh, Bhringaraja and Bhumyamalaki against antitubercular chemotherapy in cases of pulmonary tuberculosis. acontrolled study of 50 patients monitored with clinical profile and serial liver function studies suggests that these drugs definitely protect the liver from chemotherpy and prevent Chemical Jaundice.

Address : *Departent of Kayachikitsa, Institute of Medical sciences*
Banaras Hindu University
VARANSI-221005

A. II. 4

Clinical Trial Of Bhumyamalaki *(Phyllanthus Species)* Rasayana Vati On Viral B. Hepatitis Patients.

Late Prof. S. N. Tripathi. and Dr. Ramji

The major clinical manifestation of liver disease is Jaundice. Inspite of having extraordinary capacity of regeneration, a slight ignorance may lead to a serious complication with grave prognosis.

Jaundice has been considered as Kaamala in Ayurveda. Which may be disease as well as symptoms. As for as disease is concerned it is very close to hepatocelluar Jaundice. It has been identified to present mainly in two forms.

1. Koshthashakhashrita Kamala.
2. Shakhashrita Kamala/Rudhapatha Kamala (Intrahepatic obstruction)

If it is not treated properly in due course it may pass on to the stage of Kumbha-Kamala (Acute/Sub-acute hepatic failure) which has a bad prognosis. Further probably in the terminal stage he may pass to the stage of Panaki (Hepato-renal failure). Halimaka has been identified as a separate disease entity and is more comparable to post- hepatic or surgical Jaundice. Doshika predominance has been suggested as follows :-

(a) Koshthashakhashrita Kamala -Pitta

(b) Shakhashrita/Rudhapatha Kamala - Pitta and Kapha

(c) Halimaka - Vata and Pitta.

Till now **four types** of Viral hepatitis have been identified.

If we study the pathogenesis of Viral B hepatitis, it is closer to the concept of Rudhapatha Kamala which has a tendency to pass on to the stage of Kumbha Kamala.

There is no specific drug abailable which may act on viruses of Viral B hepatitis. But the course of Viral B hepitis is more severe and prolonged.

Address: *Late Prof, Deptt. of Kayachikitsa, IMS BHU,*

** *Clinical Registrar and Ph.D. Scholar, Deptt. of Kayachikitsa, I.M.S., B.H.U.*

to find out the remedy for this type is the demand of time. So it was decided to select the patients of Viral B, hepatitis for clinical trial.

Criteria For Selection Of Cases :

Clinical : Only the patients having a history of icterus for more than four weeks.

Biochemical : Serum bilirubin more that 10mg% and SGOT and SGPT was more than 250 mg%.

Such 20 Cases were selected and divided in two groups. Group A- Standared Ayurvedic Treatment of Rudhapatha Kamala. It includes the decoction of Kalmegha, Bhringraja, Kutki, Vasa, Kakamachi, Kasani, Amalaki, Haritaki, Bibhitaka in syrup form and Lawana Bhaskar - churna after meal with acid butter milk. Group B received Bhumyamalaki Rasayana tablet in the dose of 1 gm. thrice daily along with above.

Parameters for assesment :

Along with the clinical assesment serum bilirubin and SGOT, SGPT was repeated at the weakly interval HBsAg was done before starting the treatment then on 11th, 20th, 30th day.

Observations :-

There is allround improvement in both the groups however the results are better (Statistically significant) in group B as compared to group A. As for as the HBsAg has become negative in the third week in group B. On the whole response of adding Bhumyamalaki has significant effect in virus B hepatitis. Details are to be presented.

A.II-5

Herbal Remedies For The Management Of Jaundice With Special Reference To Tribal/folk Medicines Of Kerala State

• S. Rajasekharan, K. Radhakrishnan, C.R. Jawahar, P.K. Ratheesh Kumar, C.P.R. Nair, L. Saradamma and •• P. Pushpangadan.

The present communication is the outcome of the investigations carried out under the All India Co-ordinated Research Project on Ethnobiology, which is essentially a multi-disciplinary and action oriented research programme intended to conserve/preserve and document the multidimensional perspectives of the fast disappearing traditions, culture and the rich and varied knowledge system of the folk healers/ tribals including other less sophisticated communities. Here the authors highlight the correct identification, uses, including the mode of preparations, mode of administration, dose, dietary restrictions etc. of twentyfive single/simple drugs used by the tribal/folk healers of Kerala against jaundice. Certain important plants recorded are :

Abutilon indicum (L.) Sw., *Anacardium occidentale* Linn., *Arenga wightii* Griff. *Boswellia glabra* Roxb., *Caryota urens* Linn., *Connarus monocarpus* Linn., *Drynaria quercifolia* J.Smith., *Hibiscus lampas* Cav., *Impatiens hensloviana* Arn., *Teracera laevis* Vahl. etc.

Address : • *AICRPE, Regional Research Institute CCRAS, Govt. Of India, Poojapura, Trivandrum - 695 012.*
•• *Tropical Botanic Garden & Research Institute, Govt. of Kerala, Palode, Trivandrum - 695 562.*

Some Important Folk-herbal Medicines Used In Liver Diseases From Andhra Pradesh Forests.

V.C.Gupta, B.Khatoon, S.Imam and M.M. Ali Khan

Interaction between malnutrition,widely prevalent in our country, and different known and unknown factors, such as viral, bacterial, protozoal and toxic agents have been considered responsible for the patterns of liver disease in infancy, early and late childhood and in adults. The present study deals with the relationship of plants from Andhra Pradesh forests for the welfare of mankind and medicare with particular reference to liver diseases. During the medico-ethno botanical survey, 4000 plant specimens of medicinal importance comprising 600 taxa were collected from various survey sites eg: Adilabad, Nirmal, Horsley hills, Narsapur, Tirumalla hills, Toophran and Chittoor etc. The forest sites lay between 78 to 79.5 longitude and 13.0 to 18.1 N latitude.

Besides, fourteen important folk-medicinal plants were also collected from tribals at various survey sites which are used in liver diseases of hepatic origin.These were: Mooli (*Raphanus sativus* L.); Kamni (*Solanum nigrum* L.) Kasni (*Cichorium intybus* Linn.); Bhui-Amla (*Phyllanthus niruri* Linn.); Gachakaya (*Caesalpinia crista* L.); Kuppi (*Acalypha indica* L.); Mamidi (*Mangifera indica* L.); Gul-e-Tesu (*Butea monosperma* Clam); Tandra (*Terminalia belerica* Roxb.); Anjeer (*Ficus carica* Linn.); Akashbel (*Cuscuta reflexa* Roxb.); Amlica (*Tamarindus indica* Linn.);Kaluva (*Nymphaea alba* Linn.) and Galijeru (*Trianthema portulacastrum* Linn.).

Information was also collected from tribals with regard to their mode of life; population, socio-economic conditions, health, diseases, education, agriculture, trades customs and caste etc.

Address : *Central Research Institute For Unani Medicine,*
A.G. Colony Road, Erragada
Hyderabad - 500890

A.II-7

The Therapeutic Efficacy of Unani Drugs in the Cases of Jaundice Due to Viral Hepatits - A Comparative Study

Shariq A. Khan & K.M. Ismail Hussain

Jaundice is a term referred to yellow discoloration of sclera, skin and urine, resulting due to accumulation of high levels of bilirubin. The liver cells fail to take up bilirubin and conjugate it due to inflammatory process. This includes viral hepatitis what we have taken up for the study.

The treasure of unani drugs is quite rich to treat the patients of this disease successfully, but no scientific data are available. Present study was, therefore, carried out in the IPD & OPD of Dr. A.H. Unani Medical College Hospital, Kurnool (A.P.).

Total 100 positive cases of Jaundice due to viral hepatitis were selected and divided into 3 groups. Group A, consisting of 50 cases, Group B, consisting of 30 cases and Group C, consisting of 20 cases were treated with the drugs, DAWAUL KURKUM + SHARBAT BUZOORI MOATADIL + HABB-E-KABID NAUSHADRI, GUL-E-BABOOL + SABOOS- E-NAK-HUD+ BERG-E-HINA and HABB-E- AFSANTIN respectively. The clinical pathological and biochemical examinations were performed on base-line and each follow-up. The follow-ups were performed every 10th day, whereas the duration of treatment was fixed 30 days for all the three groups. At the termination of the follow-ups, it was concluded that in group A, out of 50 cases, 45 (90%) were cured, 4(8%) relieved and 1(2%) cases were partially relieved. In group B, out of 30 cases, 20 (66.6%) cured, 8(26.6%) relieved & 2(6.6%) were partially relieved. While in group C, out of 20 cases, 10(50%) cured, 8(40%) relieved and 2(10%) cases were partially relieved. No case was found having no response in any of the three groups. Significant and well marked reduction was found in the S. Bilirubin, SGPT and S. Alkaline phosphatase levels within the first 10 days of the treatment in all the three groups. The formulation administered in group A was found to be more effective than B & C.

Address : *R.R.I.U.M, P. Box 70, A.M.U., Aligarh - 202 002*

A.II-8

Management of Jaundice With A Unani Formulation

Syed Mahtab Ali

Jaundice is a very common Liver disorder noted frequently in every society. Inspite of tremendous scientific advancements, hepatology has rather added more problems to be answered than solved. There is no cure for the liver disorder in allopathic system of medicine till today. Only supportive measures are usually practiced. There are numerous herbal drugs in Unani system of medicine which provide permanent cure in jaundice. A clinical study was carried out in 50 cases of jaundice to asses the efficacy of a polyherbal unani drug containing Kasni and Mako etc. The formulation was used orally as decoction and the drug was found very effective in jaundice. The details of the formulation and action will be presented.

Address : *Faculty of Medicine, Jamia Hamdard*
New Delhi - 110062.

A.II-9

Clinical Trial With Coded Unani Drugs In HBsAg Positive Hepatitis Patients

M. Ahmad, A.Kareem, D.Gracias, M.A.Khan, and S. Khaleefathullah

Warm-e-Kabid Haad (Hepatitis) is reported as a major cause of jaundice by ancient Unani Physicians but, virology of the problem was not known to them. Hepatitis B Virus (HBV) infection is a well recognized public health problem known to cause both acute and chronic diseases which are often associated with chronic sequelae including development of hapatocellular carcinoma. As no effective non-toxic drug therapy against HBV infection is available, trials with Unani drugs are the need of the hour.

The present study consisting of 37 HBsAg positive hepatitis patients and four different compound unani formulations (IKH- 2, IKH-4, IKH-5 and IKH-9) has been carried out in the in- patient department. Out of these, 9 cases (24.3%) dropped out during the course of the treatment. Drugs were given orally in the dose of 10 gm thrice a day. The minimum and maximum durations of treatment were fixed as 30 and 60 days, respectively. Laboratory investigations were repeated on every 11th day, whereas clinical condition was recorded daily.

Results suggest that cent percent clinical improvement was achieved in 10-20 days of treatment in more than 90% of patients. More than 50% biochemical recovery in 20 days of treatment was seen in 50-80% of the patients whereas 75% - 100% patients showed serum Bilirubin 2 mg% and SGOT and SGPT 60 units at the end of the treatment with different drug regimes. Similarly 60% - 100% cases registered improvement in A/G ratio at the completion of the trial.

Address : *Regional Research Institute of Unani Medicine, Madras-600 013.*

A.II-10

Evaluation Of Efficacy Of Coded Unani Formulations On Prolonged Prothrombin Time & Elevated Bilirubin, Transaminases & Alkaline Phosphatase In Patients Of Viral Hepatitis

D. Gracias, A. Kareem, M. Ahmad, and S. Khaleefathullah

A total of 136 patients presenting with acute viral hepatitis constituted the clinical material for the present study. The clinical diagnosis was supported by elevated levels of serum bilirubin alanine and aspartate aminotransferases and alkaline phosphatase coupled with increased urinary urobilinogen. Amongst these patients 31 (22.7%) presented with prolonged prothrombin time. The mean prolongation of prothrombin time as compared with control values ranged from 6.7 sec to 7.7 sec. The present paper emboids the effect of three coded unani formulations (IKH-1, IKH-4 and IKH-9) on the patients with prolonged prothrombin time. Statistically significant normalisation of prothrombin time and bio-chemical parameters was observed at the end of the treatment.

Address : *Regional Research Institute of Unani Medicine, Madras -600013.*

A.II-11

IKH-4 In The Treatment Of Iltehab-e-kabid Had (Viral Hepatitis)

G. Sultana, M. Ahmad, M.A. Khan, D. Gracias, A.S. Kareem, and S. Khaleefathullah

Classical literature of Unani system of Medicine offers wide range of drugs for the treatment of hepatitis. The present study is a trial with a coded formula IKH-4 on 366 patients of Viral Hepatitis diagnosed on the basis of clinical picture and liver function tests. Drug was given orally in the dose of 10 gm thrice a day over a period of 50 days and follow-ups were done at 10 days intervals. 19% dropped out and in remaining cases results were evaluated.

More than 80% of the patients were completely clinically relieved within 20 days and others between 30-50 days of treatment. Biochemical recovery was suggested by singificant reduction in raised levels of serum bilirubin, GOT, GPT and Alkaline Phosphatase. No toxic effects were seen in any case during the trial.

Address : *Regional Research Institute of Unani Medicine, Madras - 600013.*

A.II-12

Response Of Jigrine Observed In 185 Viral Hepatitis Patients.

Shakeel A. Tamanna, H. Kumar, Mohd. Maaz, Hameeda

Jigrine is an indeginous poly-pharmaceutical preparation reported to be remarkably safe in normal individuals and viral hepatitis patients. In continuation to earlier studies, present group of patients were treated with placebo and Jigrine for a better comparison in large number of viral hepatitis patients (185). For diagnosis and selection of viral hepatitis patients, standard methods were used. To exclude bias, selection of treatment (either placebo or Jigrine) was done randomly for all patients. Before administration of drug, patients were admitted a night before, after careful clinical examination. Clinical diagnosis was supported by laboratory investigations (Pathological tests and Biochemical estimations and sonographic reports).

From earlier studies we selected a dose of 20 ml of Jigrine (or placebo) to be given once daily before breakfast. Patients were daily evaluated clinically and laboratory tests were repeated every week.

Drug treated group of patients showed a marked decrease in symptoms in 2-3 days (Anorexia, nausea, vomiting, anxiety, restlessness, abdominal pain).Fever and restlessness disappeared more quickly in Jigrine treated cases when compared with placebo patients. Jigrine treated group (160 patients) showed statistically significant decrease in serum bilirubin, SGOT and SGPT after one week of treatment.

Overall improvement in the conditions of Jigrine treated patients was confirmed when a significant increase was observed in haemoglobin levels and body weight. Most of the patients fully recovered in 1-6 weeks without complication. The patients who reported soon after the incidence of the desease recovered earlier but the patients who reported to our clonic after a longer period of the incidence of the disease took comparatively longer period to get recovered.

Address : *Majeedia Hospital, Jamia Hamdard, New Delhi-110062.*

A.II.13

Management of Jaundice with Simple Unani formulations.

Aslam, M. and Idris Ahmad

Disease jaundice was well Known to the Unani physicians right from Buqrat (Hippocrate) 460 B.C. to many Arab and Indian physicians. According to Buqrat any imbalance in the equilibrium of Khilt i.e. humours present in the body causes disease. Safra (Bile) and Sauda (Black bile) play an important part in the causation of this disease. In Unani literature, the authors of various materia medica and formularies have mentioned a number of simple and polypharmaceutical medicaments which were reccommended by them with successful results. The present paper deals with such drugs which are to be useful in the management of the problem.

Address : *Regional Research Instt.*
of Unani Medicine
B-1/192, Nirala NagarLucknow-226020 (U.P.)

A. III. 2

Role Of Certain Indigenous Drugs In The Management Of Jaundice And Certain Liver Disorders

Dr. V.N. Pandey, Dr. Prem Kishore, Dr. K.D. Sharma

The liver diseases have been identified in Ayurveda under Kamala (Jaundice), Yakritvriddhi (Liver enlargement) and Yakritdalyudara (Cirrhosis of Liver) from the ancient times. There have been obvious development on the classification, pathogenesis, manifestations, sequalae and management of these diseases through the ages in Ayurveda. In modern era, due to certain irreversible changes caused by some of these diseases, they have become a challenge to profession. A number of studies and trials of indigenous drugs have been taken to assess the Ayurvedic therapy successfully in the recent past.

The paper attempts to provide a brief background covering the concept of pathogenesis, classification, manifestation present status of treatment from Ayurveda and modern medical literature and prevalent practice.

The efforts made to standardise Ayurvedic treatment have been put forth on the basis of work done for Post-Graduate and doctorate degrees and the researches undortaken by the Council. The trials on Katuka and Katukayadi Yoga on various liver diseases have been discussed in detail.

Keeping in view the immense potential of ethnobotany, an attempt has been made to discuss 41 folklore claims for treatment of jaundice and liver diseases. The local classical and botanical names of plant drugs, their place of compilation and method of their application with specific parts have been discussed.

Finally the recommendations/conclusions drawn from the informations and data discussed in the paper will be presented.

Address : **Director, Central Council For Research In Ayurveda And Siddha,*
S-10, Green Park Extn. Market, New Delhi - 110 016.

A. III. 3.

Hepatoprotective Activity of Indian Medicinal plants with special reference to *Ricinus communis* Linn.

Dr. G.K. Patnaik

The easy accessibility of liver and its homogeneity only increase its Vulnerability to various infections, xenobiotics and metabolic disturbances. Consequently, the prevalence of liver diseases is widespread; ironically the remedies are few. The drugs available in the modern system of medicine bring about mostly symptomatic relief. On the contrary, the Ayurvedic practitioners claim to treat many of these diseases successfully. In recent years, taking leads from Ayurveda and other ancient sources, numerous scientific investigations have been undertaken on a variety of plants for hepatoprotective evaluation.

Sporadic information on more than 30 indigenous Ayurvedic preparations with claims hepatoprotective activity is on the records. These preparations are based on the extracts of more than 100 plants, some of the most commonly used plants being *Achillea mellefolium, Boerhaavia diffusa, Capparis spinosa, Cassia occidentlis, Cichorium Sp. Eclipta alba, Picrorhiza Kurrooa, Solanum nigrum, Tamarix gallica, Terminalia arjuna, Tinosopra cordifolia, Andrographis paniculata and Ricinrous communis*. An analysis of the study carried on Indian medicinal plants during the last decades revealed that for screening of various plants, several agents have been used with main objective of simulating viral hepatitis, fatty infiltration and cirrhosis. Judgement about degree of protection is made by reversal of toxin-altered histopathological and biochemical parameters. In addition, reports are also available on *in vitro* investigations using primary cultures of hepatocytes and neutralization of hepatitis virus in chronic patients and carriers. Most of the studies , however, are limited to ascertain the activity in the crude extract only. Very few attempts have been extended to is olate and identify the active principle, and as a consequence mechanism based investigations are less.

Ricinus communis the castor plant (Hindi: Erand) is used both by Ayurvedic and Unani physicians for several purposes. Especially the tender leavesare used to cure jaundice.

In an attempt to establish the traditional claim, we have scientifically evaluated the plant *Ricinu scommunis* for hepatoprotective activity. The dried leaf powder, commonly used form of the plants was subjected to laboratory evaluation which showed promising hepatoprotective activity.

Address : *C.D.R.I., P.Box- 173 Lucknow-226001*

Susequently the ethanolic extract of the leaf was evaluated using various *in vivo* and *in vitro* laboratory test models. It also showed significantly choleretic activity and anti-hepatotoxic activity .The primary fractionation of the crue extracts also showed varying degree of hepatoprotective activity including anti HBsAg like activity However, the butanol fraction was found to be the most potent.

Subsequent chromatographic fractionation of the butanol fraction yielded two pure compounds- viz- ricinine and N- demethylricinine. N- dethylricinine was found to posess more activity . This active principle showed a dose dependent hepatoprotective activity by restoring the toxin altered levels of several enzymatic and non-enzymatic parameters in the serum and liver samples of rats.It also possessed significant choleretic and anti-cholestatic effects.

The LD_{50} values of ricinine and N- demethyl ricinine indicated that recinine is toxic . The structural analogue, N- demethyl ricinine, however, was non- toxic and more potent. Further, this led us to synthesize analogues of ricinine some of which showed potent hepatoprotective activity without toxic effects.

The present investigation thus established the traditional claim of the plant to be hepatoprotective. Further, it suggests that the various active plants described in the traditional system should be investigated more and the active constituents could be isolated for further development of drugs to be used in the modern system also against liver ailments.

A.IV-1

Epidemic Viral Hepatitis

Dr. Rakesh Agarwal,

Epidemics of viral hepatitis have been occurring frequently in our country. Till recently, the largest and the most well documented epidemic was the Delhi hepatitis epidemic of 1955-56. In this epidemic, an estimated 29,300 persons suffered from icteric disease. This as well as the later epidemics (in Ahmedabad and the Kashmir valley) have been shown to be caused by a non- A, non-B hepatitis virus. In 1991, there was an epidemic in Kanpur, which was much larger in magnitude than the previously recorded epidemics.

In all these epidemics, males are more frequently affected than females and young adults in the age group of 15-40 years are the most affected. The disease is usually mild and has a low mortality except in pregnant females. Chronic liver damage is not seen with this infection.

Majority of epidemics have been shown to be caused by contamination of water supply systems and occur in environmental setting of heavy rains, flooding and recession of flood waters, change in course of rivers, contamination of surface water sources with sewage, inadequate methods of sewage disposal. Proper attention to clean water supply and proper and safe sewage disposal is required to prevent such epidemics.

Address : *Department of Gastroenterology,*
Sanjay Gandhi Post-Graduate Institute of Medical Sciences,
PB 375, Lucknou226001.

A.IV-2

A Clinical Study Of Homoeopathic Drugs in Cases Of Jaundice Epidemic

Dr. Girish Gupta

To scientifically evaluate efficacy of Homeopathic drugs in confirmed cases of Jaundice, a clinical study was planned to be carried out in 100 outdoor patients attending Gaurang Clinic. The patients were of both the sexes and belonging to various socio-economic status. Their age varied from 10 to 70 yrs. Most of the patients were derived from epidemic areas in and around Lucknow city and the maximum influx was noted between March to July,1991.

The main parameters used in the study were liver function tests like level of serum bilirubin, SGOT, SGPT,SAP, routine urine examinations, Australia antigen (Hbs Ag) and in few cases ultrasonography of hepato biliary region. The level of serum bilirubin in these cases ranged from 2 mg% to as high as 36% . These investigations were done at regular intervals on patient's expenses in various diagnostic laboratories.

The Chief Homoeopathic drugs used in the study on the basis of signs and symptoms of the cases were Lycopodium, China, Myrica, Leptandra, Phosphorus, Nux Vomica, Chelidonium magus, Hydrastis Canadensis, Carduus Marianus, Arsenic Album, Natrum Sulph, Sulphur and Ceanothus. The Potencies of the drugs employed ranged from mother tincture to 30,200 & 1000 and were chosen on the basis of severity, period of illness and degree of Jaundice.

The level of serum bilirubin, which was the guiding pointer of disease and recovery, started falling down within 72 hours of the treatment and managemnt and touched normal between 15 days to 60 days. The period of recovery depended mainly upon the level of the bilirubin, general health of the patient, their adherence to proper regimen, hours of rest and quality of diet. A few patients even recovered from hepatic coma who were otherwise declared desparate ones. The drugs in such cases were administered by Ryle's tubes in liquid form alongwith vitamins, glucose & conventional liver tonics.

The overall result of this study clearly proves positive efficacy of homoeopathic drugs in mitigating morbidity and mortality of Jaundice affected population. Since these drugs are clinically safe, easily available, administered in low palatable doses and highly economical, these must be patronised at large by various organisations like W.H.O. involved in finding the strategies to curb human illnesses.

Address: *Gaurang Clinic*
B-1/16, Sector A., Kapoorthala, Aliganj, Lucknow -226020

A.V-1

Strategic Planning In Herbal Drug Development An Exercise In Stringing Beads ?

M. S. Premila

The climate for an acceptance of herbal drugs has never been brighter. There is a world-wide renaissance of drugs derived from medicinal plants and an interest in scientific validation of claims of traditional systems of medicine. India is uniquely placed with its rich flora and common heritage of several traditional systems of medicine to exploit this 'green' wave. Much information is available in India which needs to be put together like beads in a chain to make an impact. Whether and how far we can succeed in our efforts to do this will depend on how they are directed and organised. This paper examines some of the problems that we face and discusses with examples whether we can learn from the experience in other countries.

Address : *SPIC Ltd.,*
Pharmaceuticals Division,
R & D Centre, P.B. No : 1,
Maraimalai Nagar 603 209.

Key-Note Address

Explosion In Knowledge And Experimental Wisdom

Dr. Ashok B. Vaidya,

A 1990 monograph of 558 pages, edited by Zuckerman, has citation of more than 800 references on viral hepatitis. The total database on viral hepatitis is currently an information explosion that could challenge even the most stable neuronal circuitry of any eminent hepatologist. Now if we were to add to this, the massive literature on jaundice from several centuries- old alternative systems of medicine, the results could be devastating. It is desirable that we evolve strategies of research, which are cost-effective and priority-oriented for the prevention of hepatitis. The experiential wisdom of other systems can be tapped not only for the research projects but also for consensus emergence for community control of hepatitis. Social scientists, health administrators, voluntary organisations and all forms of media should then judiciously develop the key messages emerging from capsuled wisdom.

The experiential wisdom of alternative systems and modern life and health sciences, suggest that we can include the following modalities in the management of hepatitis :

(1) *Picrorhiza kurroa* for promoting the bile flow and reducing lipid peroxidation,

(2) *Boerhaavia diffusa* as an anti-inflammatory agent, also possibly stimulating the regeneration of hepatic parenchymal cells.

(3) *Tinospora cordifolia* as a Rasayana and immunomodulator to reduce the immunopathological consequences of viral liver injury. Some of the plants or formulations are also advised to be stage-specific.

The vaccination programme in pregnant women with Hep-B vaccine needs maximum attention at national scale. And hygiene has to be a top priority in our national programmes to prevent transmission of hepatitis. Besides experiential wisdom and technical knowledge, we would need organizational efficiency and management skills to implement the programmes to control hepatitis.

Address : *Regional Medical Director (South Asia), CIBA-GEIGY*
Hon.Jt.Med.Director, Swami Prakashananda
Ayurveda Research Centre, Bombay

We Thank

Our Sponsors

and

Advertisers

The Cinkara days
The Cinkara months
The Cinkara years

Hectic weekdays. Week-end chores. Tireless studies. Tiring sports. General disorders. Specific scores. In the daily grind of normal living, Cinkara makes life so much peppier. Naturally.

Cinkara works, non-stop

An effective energy restorer, Cinkara is a solution for most of your everyday problems.

It helps to normalise blood circulation, reduces fatty deposits around the liver and stimulates the digestive system — making you fighting fit for hard days of work. Carefully blended folic acid, vitamin B12 and iron prevent anaemia, so common in expectant mothers. And special micronutrients, such as zinc and iodine, improve learning and memory — a boon for students.

The natural all-rounder

Cinkara is free from alcohol, leptazol and caffeine. It is non-toxic and non-habit forming. And its effectiveness, especially as an energy recharger, has been proven in numerous medical researches.

Now what could be a better way to fortify your family. Against fatigue, and so much more.

Cinkara is specially useful for:

• Run down and debilitated conditions • Strenuous exercise • Vitamin deficiencies • Convalescence • Lack of appetite • Growing children • Lactating mothers • Loss of weight • Mal-nutrition • Excessive metabolism • Stress and acute illness • Mental and intellectual development of students.

THE UNIQUE COMBINATION OF ELEMENTS, HERBS AND VITAMINS.

cinkara

THE WORLD-FAMED TONIC FOR THE WHOLE FAMILY, ALL THE YEAR ROUND.

Hamdard

LSPSS Publications at a glance

Name of Publication	Periodicity	Price	Published from
English News letter	Quarterly	Free to members	L.S.P.S.S., P.B. No - 7102 Coimbatore-641 045
Compound Formulations (Oils)	Occasional	Rs. 25/-	"
Compound Formulations (Kwaths and Kashayas)	"	Rs. 25/-	"
Medicinal Plants Useful in MCH	"	Rs. 25/-	"
Visha Chikitsa Manual	"	Rs. 15/-	"
Jeevaniya (English)	Bimonthly	Rs. 30/- (Annual)	LSPSS Publications, E-III/250, Sector - H, Aliganj Lucknow - 226 020.
Jeevaniya (Hindi)	"	"	"
Hindi News letter	Quarterly	Free to members	"
Monographs Series:	Quarterly		
Local Health Traditions (Hindi)			"
Local Health Traditions (English)		Rs.25/- Rs. 20/- for members	LSPSS Publications C/o PPST Foundation, 29, IVth Main Road, Gandhi Nagar, Adyar Madras - 600 020.
Indigenous Science of Nutrition-Vol.I	"	Rs. 30/- Rs. 25/- for members.	
Mother and Child Health Vol. I	"	"	"
Mother and Child Health Vol. II	"	"	"
Marma Chikitsa	"	"	"

DOCTORS TAKE ALCOHOL SERIOUSLY

A meeting of pharmacology was held to discuss the harmful effects of alcohol. A discovery was made which was indeed satisfying.

What Dr. S.S. Agarwal and his colleagues from the Khanpore College of Pharmacy discovered was that Cinkara helps in protecting and saving the liver from the damages of alcohol.

Experiments and exhaustive research indicated that alcohol consumption caused fat depositions in the liver which impaired its functioning and made it sluggish.

Worse still, studies revealed that this leads to fatal diseases like cirrhosis, hepatitis and tumors.

But the triumph came when experiments proved that Cinkara reduces the fat deposited in the liver and checks a further deposition of fat due to alcohol intake.

Now what could be better news and more valuable for those whose livers have been damaged by excessive drinking.

Take Cinkara. Before it is too late.

For a free pamphlet on recent research done on Cinkara, please write to:
Hamdard (Wakf) Laboratories
P.O. Box No. 1507
Delhi-110 006

The unique combination of elements, herbs and vitamins.

cinkara

Hamdard

The world-famed tonic, for the whole family, all the year round.

HTA 5427

AS YOU LIKE IT!

Regulates liver functions: Promotes bile secretion.

•

Protects liver from damage likely to be induced by drugs, toxins or alcohol.

•

Accelerates liver repair following acute or chronic liver disease.

•

Tones up the entire digestive system: relieving indigestion, correcting constipation, stimulating appetite and weight gain.

•

Cuts short convalescence period.

CHARAK PHARMACEUTICALS (INDIA) LTD.
BOMBAY - 400 011

When water and electrolytes become life-saving

Prolyte

restores 'the waters of life'

the WHO/UNICEF recommended ORS formulation

Prolyte

the life-saving therapy in dehydration

Cipla Cipla Ltd. Bombay Central Bombay 400 008.