

King's Fund



54001001329963

King's Fund

*'Use of complementary medicine within the
primary care group setting'*

King's Fund Workshop Pack

**'Complementary Medicine, Primary Care and the NHS: Applying
the Evidence' Conference**

26th September 2000

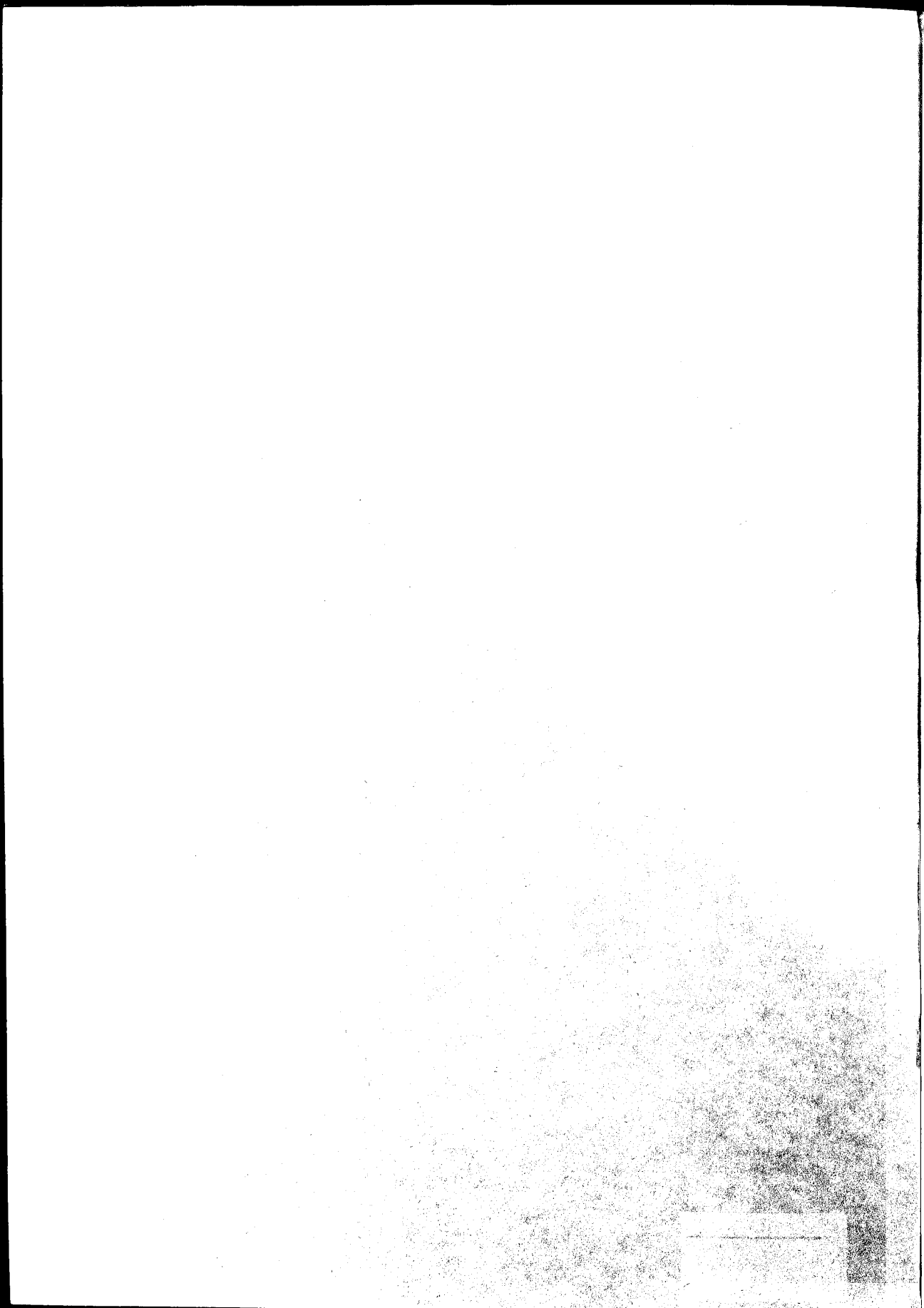
Royal Society of Medicine, London

KING'S FUND LIBRARY 11-13 CAVENDISH SQUARE LONDON W1G 0AN	
Class mark HMK	Extensions Cor
Date of receipt -	Price -

THE TEAM

Dr. David Peters – Clinical Director, Complementary Therapies, University of Westminster
Ivan Corea – Fellow, King's Fund
Lynne Love – Special Projects, King's Fund
Dr. Shantha Godagama – Founder President Ayurvedic Medical Association, UK
Dr. Liliana Stringer – Chief Executive, Ibis International Corporation
Sandeep Garg – Managing-Director Vedic Medical Hall, London

HMK (Cor)





Workshop: Applying the evidence
Use of complementary medicine within the primary care group setting

Aim: to report back to the main meeting on participants' experience of developing (or attempting to develop) CT services in PCGs

Method: identify any existing models or proposed models for CT commissioning and clinical governance relevant to CT. We expect a number of key issues to have been identified in the morning lectures and that participants will have experience and documents that are relevant. The issue of needs assessment and quality markers for service development are for example important drivers.

Notes on one possible model for CT clinical governance are attached. A short presentation on this model in the context of practice development planning could help the group explore the implications for developing needs led, evidence based CT services; and the parallel challenges to professional development.

Dr David Peters was formerly a GP with Marylebone Health Centre and Lecturer in General Practice at St Mary's Hospital Medical School. He is a doctor, a Registered Osteopath and a member of the Faculty of Homoeopathy. For the last twelve years he has been directing the programme delivering and researching complementary therapies at Marylebone Health Centre, a primary care unit set up in 1986 to develop new approaches for the inner city¹. He is the current Clinical Director for the Centre for Community Care & Primary Health in the University of Westminster's new School of Integrated Health. This inter-disciplinary unit's programmes now includes six undergraduate and two postgraduate complementary therapy degrees. In May 1998 the Prince of Wales opened CCCPH's complementary therapy Polyclinic where service delivery overlaps with training, inter-professional education, and research.

As Chair of the Working Party on Delivery Mechanisms he helped produce the Report for the Prince of Wales' Foundation for Integrated Medicine on ways of incorporating complementary therapies into mainstream practice². He co-authored the Encyclopaedia of Complementary Medicine for Dorling Kindersley (1997) who published a second edition along with a new book 'The Complete Guide to Integrated Medicine' in August 2000. He is currently authoring and editing two other books, Understanding the Placebo Response (Churchill-Livingstone Spring 2001) and Integrating Complementary Therapies; a practical workbook for Primary Care (Harcourt Brace Spring 2001). His main research interest is in the relevance of CTs to mainstream medicine and the development of healthcare information systems that can empower patients and practitioners.

¹ Pietroni C. 1996. Innovations in Primary Care. Edinburgh. Churchill-Livingstone.

² Coates et al. 1998. Integrated health care: a way forward for the next five years (a discussion document from the Prince of Wales' Initiative. Jour. Alt. Comp. Med. 4; 2

There are two main reasons for this. First, the...
The second reason is that the...
The third reason is that the...

On the other hand, it is also true that...
The first reason for this is that...
The second reason is that...
The third reason is that...

As a result, it is clear that...
The first reason for this is that...
The second reason is that...
The third reason is that...

It is also true that...
The first reason for this is that...
The second reason is that...
The third reason is that...

**Clinical Governance**

Clinical governance is a current term that brings together aspects of working intended to contribute to a high quality, accountable Health Service.

"creating an environment in which excellence in clinical care will flourish"

"aiming to create a working environment which is open and participative, where ideas and good practice are shared, where education and research are valued"¹

CG transfers ideas from the field of management to to achieve quality assurance and quality improvement². This entails being able to give an assurance about the quality of services provided³. Components of these processes are already familiar to nurses and NHS primary health care workers. They will soon involve all clinical and administrative staff in the NHS and become increasingly relevant to all health care workers and their clients. Therefor, if the single playing field of commissioning is to become a reality, CG is likely to be an important driver. It is very likely then that CT service development will be importantly shaped by CG considerations

COMPONENTS OF CLINICAL GOVERNANCE

- ◆ Accountability (practitioner and practice)
- ◆ Responsibility (individual and corporate)
- ◆ Continuing Professional Development
- ◆ Clinical Audit
- ◆ Teamwork and communication
- ◆ Partnership with patients and carers
- ◆ Management policies
- ◆ Risk management
- ◆ Performance monitoring

Practice Development Plans are a key building block for CG. Personal Education Plans are to be developed in relation to the Practice Development Plan which in turn is shaped by the Area's Health Development agenda. This practice based approach to CPD is inextricably linked with an accountability framework and paves the way for regulation of primary care services and the reaccréditation process. Practitioners will have to link their own professional development with an accountability framework aimed at strengthening the development and quality of the practice as a whole. The decision to develop CT resources therefor entails a cascade of personal and practice development which will have to be embedded in adequate local needs assessment and a comprehensive framework of clinical governance and audit.

¹ Scally D, Donaldson J. Clinical Governance and the drive for quality improvement in the new NHS in England BMJ 1998; 317:61-65

² Koch H. (1992) Implementing and Sustaining Total Quality Management in Health Care, London Sage

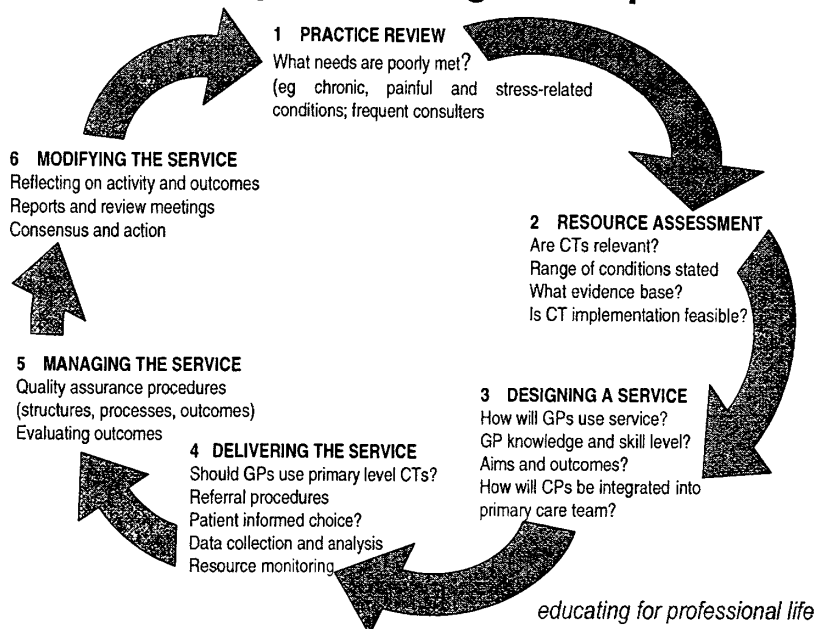
³ Van Zwanenberg T. (1999) Clinical Governance in Primary Care. Radcliffe Medical Press

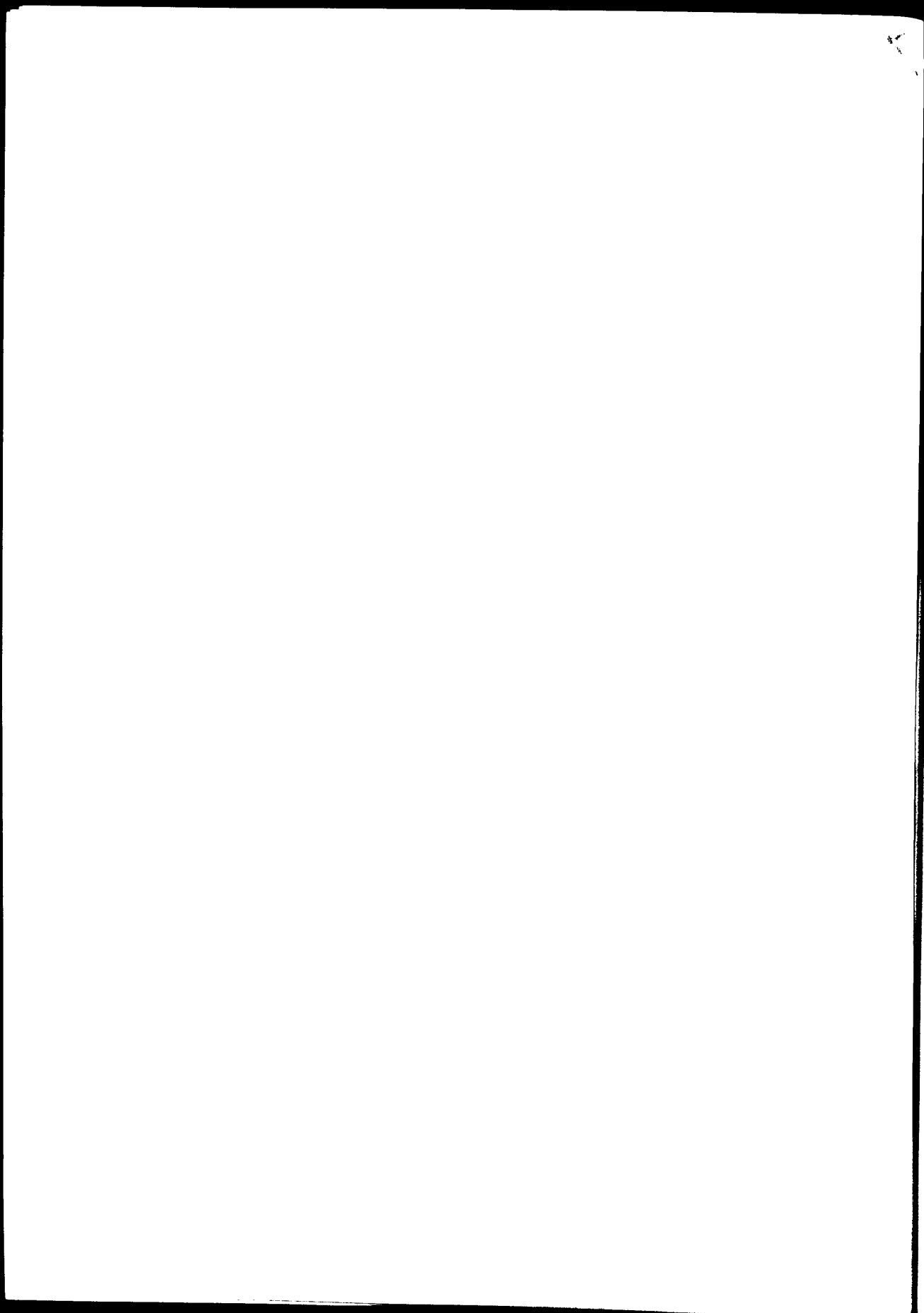
Sue Morrison & David Peters

26 Sept 2000

CT, Clinical Governance and
service development within PCGs

Integrating CTs into general practice





Criteria for guideline development

- conditions where some evidence of effectiveness exists
- conditions GPs stated they would want to refer
- conditions GPs had referred to CPs previously
- conditions where CPs declare effectiveness or a strong interest in treating

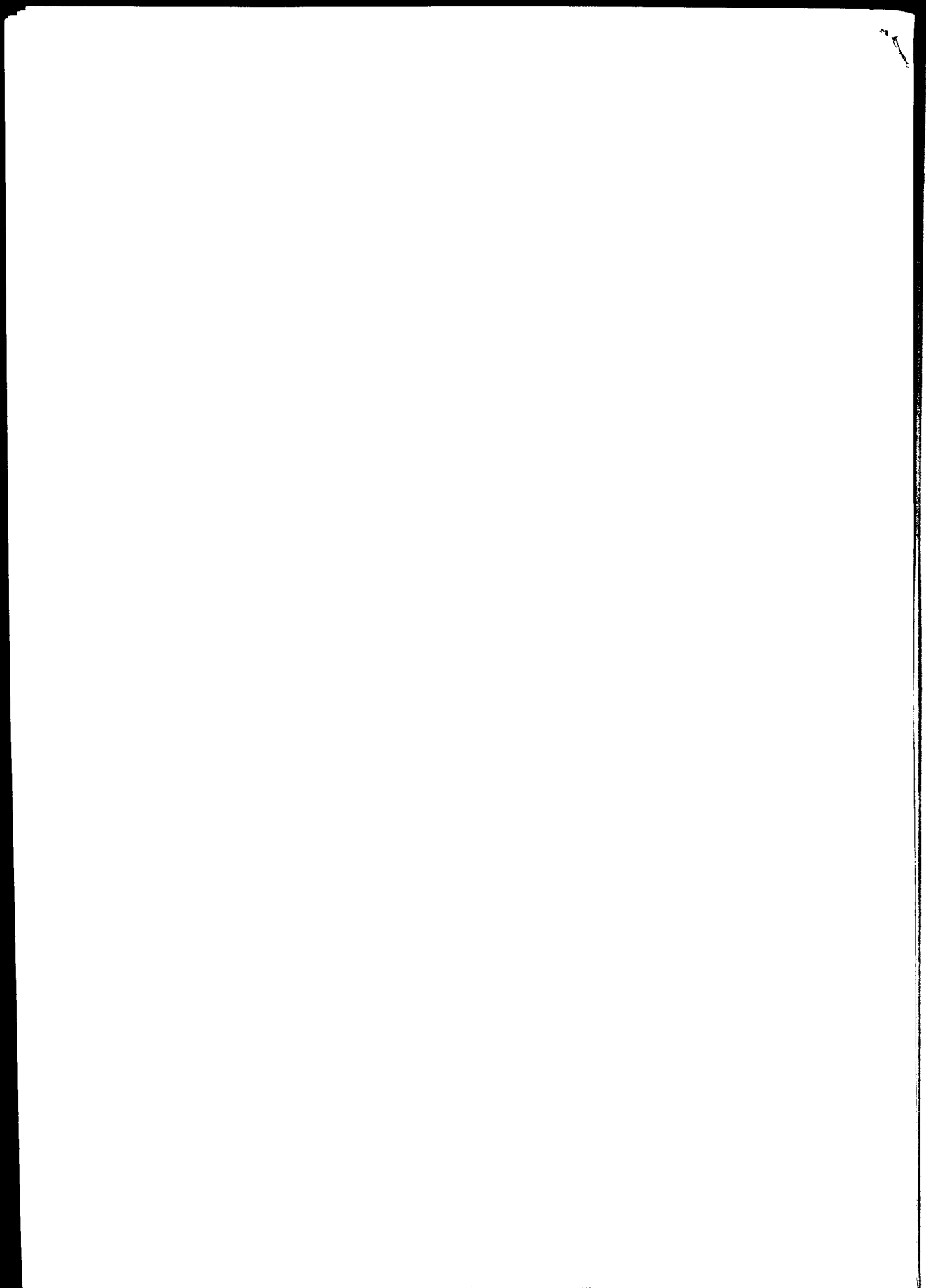
Conditions considered for complementary therapy
 (possible order of relevance)

	1	2	3	selfcare
• asthma	acu	hom		SM?yoga
• irritable bowel syndrome, non-specific dyspepsia	nutri	acu		SM/diet
• migraine	acu	hom	ost	SM/diet
• eczema, rhinitis and hay-fever	nutri	hom		SM/diet
• musculo-skeletal pain including				
back and neck pain (acute)	ost	acu	mass	exercise
back and neck pain (chronic)	acu	ost		SM/ exercise
osteo-arthritis	acu	ost	mass	exercise
rheumatoid arthritis	nutri	acu	hom	SM
myo-fascial pain	acu	ost		SM/ exercise
FMG syndrome	acu	ost		SM/yoga
• menstrual disorders, peri-menopausal problems	hom	acu	nutri	SM/diet?
• complex chronic illness including				
chronic inflammatory diseases		nutri	hom	
persistent pain	acu	mass		SM
persistent fatigue	hom	mass	nutri	SM
• stress related and transient situational conditions (eg bereavement, anxiety, pain, insomnia)	mass			SM

(SM=stress management)

Consider the complementary therapy option if

- New diagnosis of above conditions
- Conventional treatment of above conditions proving unsatisfactory
- Side-effects of conventional treatment of above conditions
- Patient request for non-conventional treatment of above conditions
- Advice on a complex case (Dear CP, might your therapy help?) CAUTION!

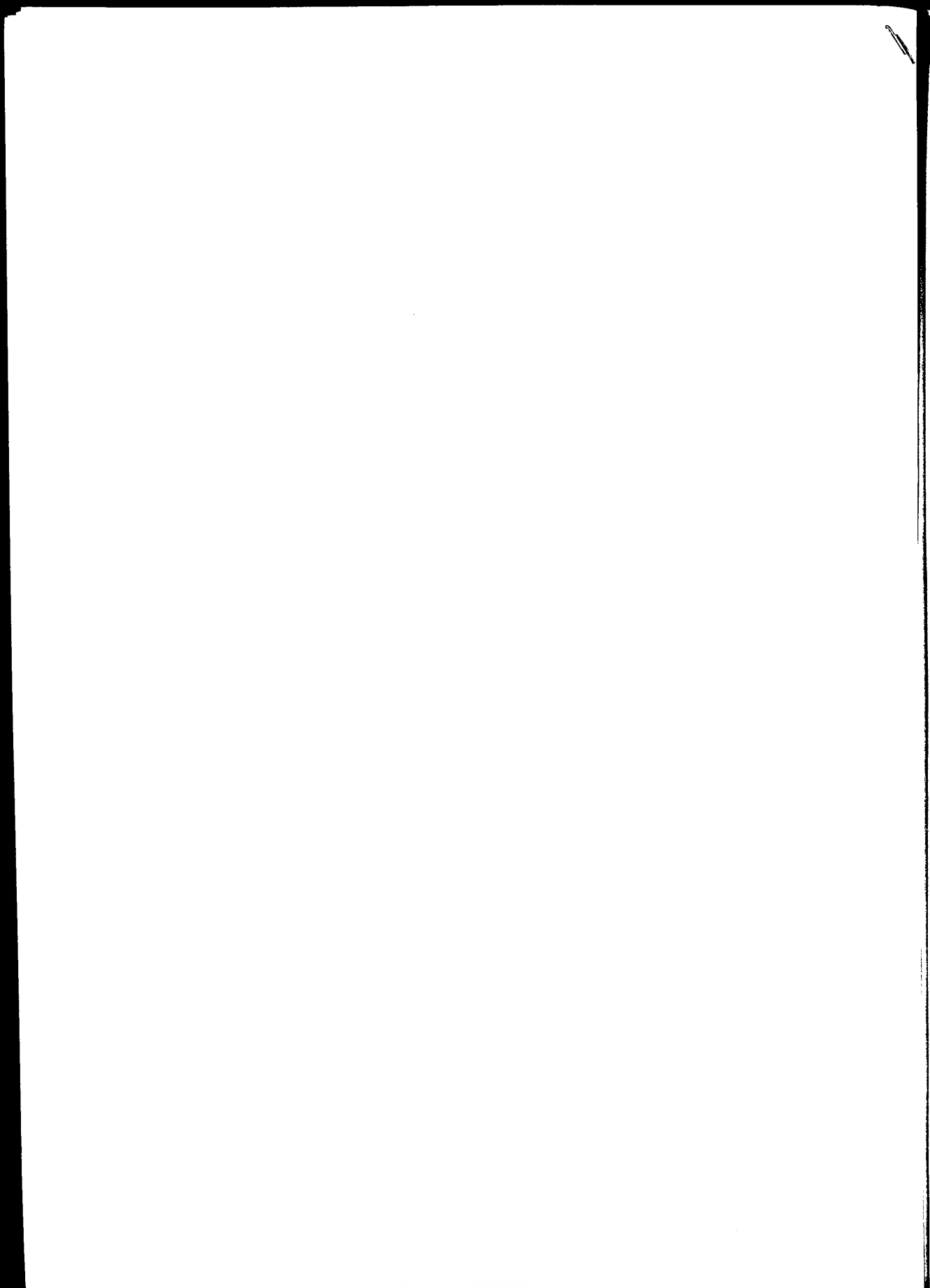


Summarising current research evidence for complementary therapies in common conditions

Therapy	acup- uncture	homoe- opathy	manual- therapies	nutritional therapies	herbal medicine	mind- body methods & hypnotherapy
Conditions						
asthma	3 subjectively >	4	3 ost/chiro	4 diet strategies	2	4 hypno, relaxation
rhinitis and hay fever	3 perennial r	4 hay fever		2 exclusion diets	3 'sobritol'	3 hypnotherapy
eczema		2		4 exclusion diets	4 TCM	3 hypnotherapy
mild-moderate hypertension				3 Mg supp veg diet		3-4 meditation, relaxation, biofeedback, exercise
ischaemic heart disease	3 electro-acup		3 massage	4 anti-oxidants fish oils < 3 gly	3	4 Omish CBT package = < fats, exercise, relaxn
cerebrovascular disease					4 gingko	
chronic fatigue syndrome	2	2		2		4 CBT programme
cancer related problems	5 chemo nausea	3 ?iscador < recurrence	3 massage	3 prevention		4 >quality of life & survival in Ca breast
mild to moderate depression	3 electro-acu			2	4 St J wort	4 CBT, exercise
inflammatory bowel disease	2	2	3 massage (pain)	4 exclusn. d (CD) fish oils (UC)	2	3 biofeedback stress managt
IBS	2	2		4 exclusion diet	3 pmint. oil	4 hypnotherapy
pre-menstrual syndrome	2	2	3 reflexology	3 supplements	3	3
menstrual pain	4		4 ost/chiro			
peri-menopausal problems				3 dietary phyto- oestrogens	3 'agnolyt'	3 exercise > bone mass
benign prostatic hypertrophy					5 saw pm'etto	
back/neck pain	4		4 ost/chiro			4 persistent back pain
headache	2		3 ost/chiro			3-4 visualisn, bio-fb
migraine	4	3	3 chiropractic	4 exclusion diet magnesium?	4 feverfew prevents	4 bio-feedback relaxation training
osteoarthritis	3 knees? hips? neck? back?		3 back neck (ost/chiro)	3 glucosamine, exclusion diet	4 capsaicin ointment	4 CBT for persistent pain
rheumatoid arthritis	2	3	3 massage (see pain)	4 vegetarian diet fish oil supps	3	3 CBT, biofeedback (pain)
muscle pain (FMS & myofascial)	3	3	3	3 magn suppls?		3 hypno, meditation
persistent pain	4 low back pain		3 massage (cancer pain)		3 capsaic. oint (post herp n)	4 CBT for pain managt

5 = DEFINITELY good evidence from several sound randomized controlled trials or a meta-analysis
4 = PROBABLY evidence from randomized and or controlled trials
3 = POSSIBLY some research: results: inconclusive, studies conflicting, or methods open to question
2 = OPINION practitioner conviction, expert opinion or clinical experience but no reliable research
1 = RUMOUR 'traditional use', but effectiveness doubted or research suggesting CT inappropriate

MHC / University of Westminster © updated March 2000



e - val 3h
see p.2

Collaboration between the NHS and local government -time for a new King's Fund Partnership Initiative?

This paper sets out some early thoughts on a new programme of work that the Fund might undertake with a view to promoting better integrated care and support for vulnerable groups. This will focus on the partnerships between health and social services that are necessary for planning, commissioning and providing care services. The work will be undertaken at a time when the Government plans to put in place new arrangements intended to enable the NHS and local government to work together more effectively. These same arrangements may also introduce new tensions that may weaken partnerships already formed.

The proposed programme could be expanded to encompass health improvement responsibilities of the NHS and local Councils. This is not discussed here in any detail and needs further discussion.

The demand for help with partnership working

Over the last year, the Fund has been approached by central, regional and local organisations with requests for assistance around the partnership agenda. We have been able to help at national and regional levels, facilitating workshops and seminars, presenting findings from our own research and development projects etc but, in most cases, we have not been able to help individual health or local authorities who have encountered political or technical difficulties with joint work.

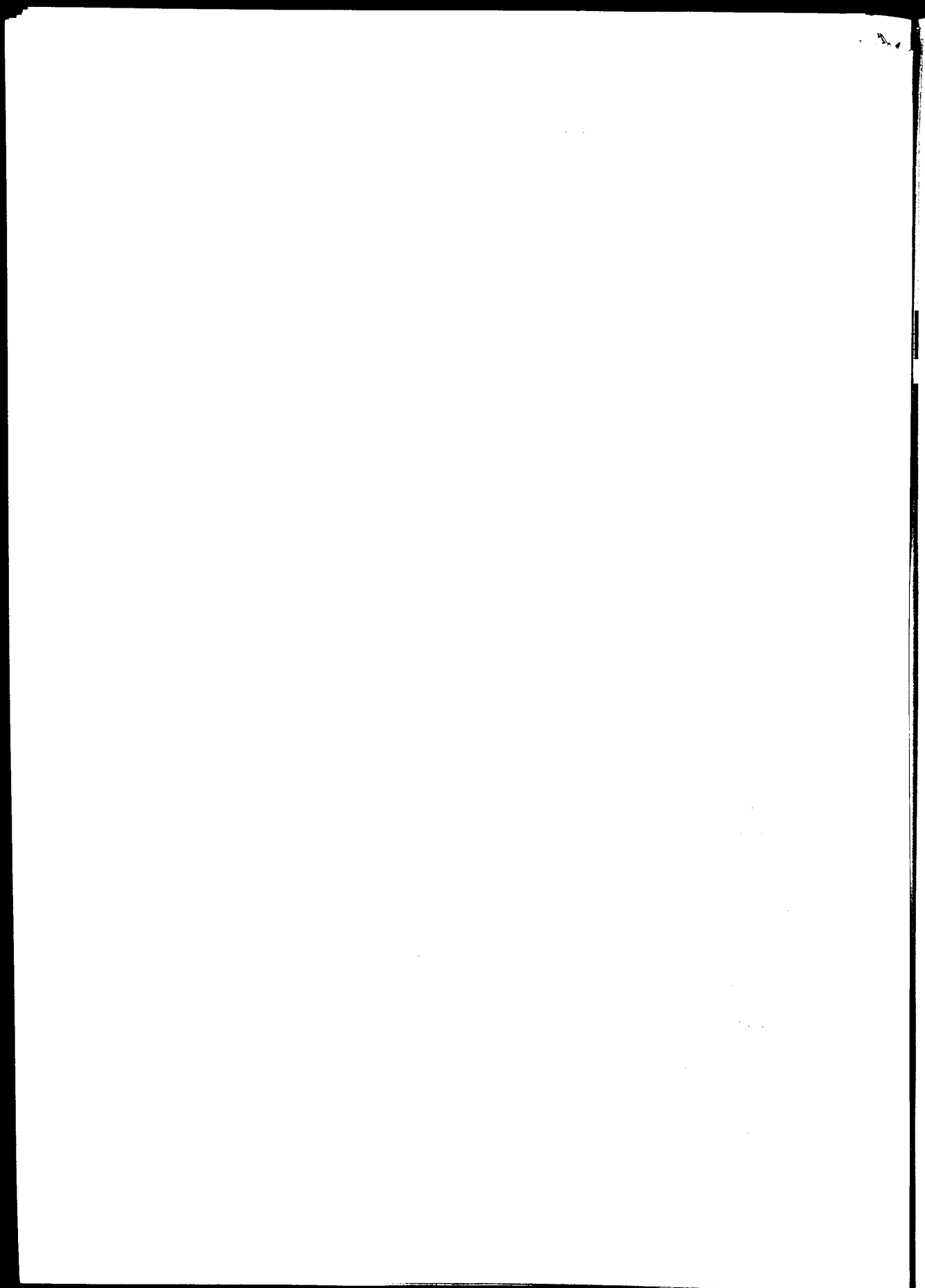
We anticipate that the demand for help will increase over the coming year as more authorities consider using the Health Act flexibilities. This Act allows authorities to pool budgets, to identify lead commissioners and to manage integrated provision. Very few authorities (27 to date?) have taken up these flexibilities so far. However, in the NHS Plan, the Government makes it clear that it will compel authorities to use these powers. It also proposes to set up "in areas that want to follow that route" new integrated organisations called Care Trusts, where health and social services will be effectively merged. While Care Trusts are seen by some as an opportunity, they are seen by others as a threat which might be headed off if they could only demonstrate effective working as separate agencies.

We would like to be able to assist health and social care organisations to work together in this changing environment, by organising a programme that will help them clarify and overcome the difficulties and build on good work already achieved. This will be consistent with one of the key strategic intents of the Fund.

Problems with partnership

Drawing on work underway in the Health Systems, Community Care and Primary Care Programmes, we have observed a number of challenges facing health authorities, primary care groups and trusts, and local authorities as they work together to plan and deliver better services.

- social services' influence on the work of PCG/Ts is low, despite membership on the Board.



- joint working is made harder when there is no co-terminosity between PCG/T and local authority boundaries
- there are technical problems with pooled budgets. Financial accountability rests with two agencies and audit trails are needed to ensure that public money is being spent appropriately. It is not always clear what monies are being pooled for what service or group. This can be a real problem, for instance, in the development of intermediate care services for older people.
- different partners can have different views on risk management. The result can be lack of agreement on service models and best practice. It can lead to an over-reliance on residential care as a "safe option" for vulnerable people. *(Are we saying that health professionals are more risk averse than social care pros?)*
- different terms and conditions of health and social care staff can hinder the development of integrated teams providing community services.
- the strategic planning "whirl" can, at times, seem to be out of touch with the creation and operation of integrated teams on the ground. Horizontal links between agencies can be strong, while vertical links can be comparatively weak
- other problems? *(add in different preoccupations with health improvement, health inequalities; the new challenge of Best Value for health as well as Las ; the process of forming a Care Trust; how best to consult/involve users and carers ???)*

What the Fund has to offer

Add in here who is doing what in the Fund.

Primary and Community Care research and development projects

- examining how PCG/Ts and social services are working together to improve services for older people;
- providing support to health and social care agencies as they develop strategic approaches to rehabilitation and intermediate care;
- developing standards for carers support services with health, social services and the voluntary sector;
- examining the impact of new configurations of trusts on services for people with mental health problems (and on the partnerships required for integrated care)
-*Steve to add in more about Tracker Study findings etc.*
- Health Systems - evaluating use being made of pooled budgets in 3 parts of the country.
- Public Health - engaged in NHS/LA partnerships in Health and Regeneration Initiative. Also undertook study of HiMPS in London (with Primary Care)
- Education and Leadership - is partnership covered in programmes for non-execs and senior managers ? Is it an issue arising in learning sets? Do some programmes purposively attract managers from different sectors who should be working together? *(Check with David Knowles)*

This all adds up to a great deal of knowledge and understanding of what works and what doesn't, based on experience of working in the field. Some of this knowledge amounts to expertise in joint working, with a capacity to analyse factors facilitating or hindering progress. It also means that we have people who are skilled in supporting others to identify and address difficulties arising, who can clarify (and simplify)

Journal of Management Education 30(6)p. 789-804

It is important to note that the results of the present study are based on a cross-sectional design. Therefore, the causal relationship between the variables cannot be established. Future research should use a longitudinal design to investigate the relationship between the variables over time. Additionally, the study was conducted in a specific cultural context, and the results may not be generalizable to other cultures. Future research should investigate the relationship between the variables in different cultural contexts.

complex information, who can offer opportunities for shared learning among people actually doing the work on the ground.

A new programme of work

A number of ideas have emerged for a range of related activities that could be shaped into a coherent year long programme. (*More work needed to achieve this coherence, folks!*) These include

- setting up an information exchange for authorities to share who is doing what and how. This could illuminate the broad approaches being adopted, as well as the structures, processes and procedures that are enabling progress to be made
- arms-length observation of "pioneering" organisations who are making the running with pooled budgets, Care Trusts etc. Distillation and dissemination of processes, structures, cultures, outputs, outcomes etc
- series of seminars from January 2001, addressing particular topics eg. Making pooled budgets work, Are Care Trusts the answer to our problems etc. Could be undertaken in conjunction with Nuffield Institute?
- organise a learning network for interested authorities (regional learning groups? learning sets, workshops etc)
- establishing a Working Party to look at the "big picture" of partnerships in health

[The body of the page contains extremely faint, illegible text, likely bleed-through from the reverse side of the document.]

‘The use of Ayurvedic Medicine’

Information Pack for Conference Delegates

‘Complementary Medicine, Primary Care and the NHS: Applying the Evidence’ Conference

26th September 2000

Royal Society of Medicine, London



AYURVEDA

**" May I have breath in my nostrils, voice in my mouth,
sight in my eyes, hearing in my ears, hair, which does
not grey, teeth that are not discoloured, and much
strength in my arms. May I have power in my thighs,
swiftness in my legs, steadfastness in my feet. May
my limbs remain unimpaired and my soul unconquered. "**

AYURVEDA is the oldest surviving systematic approach to health and was first described in Sanskrit literature approximately 5000 years ago and has been constantly improved since. The above hymn, embodies the aims of **AYURVEDA**.

Mankind has eventually come to appreciate the absolute need and immense benefit of **ECOLOGICAL HARMONY** and **BALANCE** among various elements of **MOTHER NATURE**. As mankind exists within nature it is only logical that the importance of balance of elements in the human body system is equally understood and maintained.

Some sages of ancient India gave **YOGA** to the world with its universal appeal and acceptance. Others developed a natural health – care system known as **AYURVEDA** to **protect, revitalise, correct, and strengthen the human body system**.

The prime concern of Ayurveda is to ensure a healthy long life by maintaining and promoting positive health. According to Ayurveda health depends on the balanced state of all bodily elements, (Vata, Pitta, Kapha = Air, Fire & Water, Water & Earth) and that an imbalance due to an abnormal increase or depletion of these causes ill health. Vata controls movement, Pitta influences metabolism and Kapha is responsible for structure.

As these essential elements exist in nature in their natural state, Ayurveda uses these to correct this imbalance. The action is **adjustive** and **not suppressive**, therefore, a safe and natural way of **correcting any imbalance of bodily elements and biorhythms**. The results, thus, can be sustained and long lasting.

Ayurvedics contain a large number of ingredients as being a science of balance, one principle balances the other through synergism or antagonism. Some enhance the action, others avoid or minimise the side – effects.

Herbs form by far the main ingredients. In addition Ayurvedics may contain minerals. As mineral structure vary from the tissue elements of the body, (unlike plants which are more akin to the functioning of the human organism, and thus easily digested and assimilated into the cells of the body), they undergo a special process to remove any toxins and avert any resulting side-effects.

Ayurvedic formulations provide nutrition in the form of natural amino acids, carbohydrates and many of them contain phosphate, boron, potassium, calcium, magnesium, sodium, iron, silicon, selenium and other important bioflavonoids, antioxidants and natural vitamins, thereby providing wholesome nutrition to the body. Many of the herbs used in Ayurveda improve the immune system thereby protecting the body against infections. **These formulations nourish deficiencies in the body and build-up adequate energy and supplement the deficiency of the substances in the body, which may bring about diseases.** They also help to eliminate deep-seated toxins as a part of disease prevention and thus they not only help in improving physiological functions of the body but also provide enough nutrition, which helps in disease prevention.

The various ingredients act synergistically to provide a balancing effect on the human organism as a whole, activating the body's own defence mechanism, promoting overall health.

Ayurveda, because it is based on knowledge of the most fundamental laws of nature governing health, provides great ability to prevent(*sensu strictu*) disease. Furthermore, Ayurveda recognises 6 sequential levels of development of imbalance in physiology, the first four levels of which occur before any symptoms, as recognised by allopathy, occur. **Therefore Ayurvedic treatments often deal with minor imbalances before they become major indications, proving Ayurveda's role as a preventative system as well as a curative one.**



Vedic Medical Hall Ltd.

21 Southwick Mews, London W2 1JG Tel:020 7706 0070 Fax:020 7706 0060 Email:VMH_LTD@sgarg.globalnet.co.uk

COMPANY PROFILE

Established in 1991. Its main aim was to spread awareness of Ayurveda, the Indian system of medicine, and make available to the public safe; highly researched; and quality products, to improve and maintain good health.

VMH has been working hard to disseminate this knowledge and prove the case for Ayurveda. We have participated in consumer exhibitions, providing free consultations to the public by Ayurvedic practitioners; taken part in open days at teaching institutions; helped in the setting up of the Ayurvedic Trade Association ; provided support in form of clinical data and product monographs to the Ayurvedic Medical Association and other alternative practitioners/ herbalists; Worked with community based alcohol and drug abuse centres; are actively involved with the MCA on discussions to find a way for regulating products based on traditional systems of medicine.

VMH's search for products that are: safe; effective; and have been subjected to the same scrutiny as their allopathic counterparts resulted in discovering companies that have dedicated many years of modern, scientific research and development to transform a traditional, esoteric and previously hard to understand system into a totally safe and natural alternative .Each formulation represents the ultimate scientific validation of thousands of years of the natural healthcare system of AYURVEDA.

The products are available in more than 30 countries and recommended by over 140,000 healthcare practitioners worldwide. In the U.K. the products are recommended by reputable practitioners from various fields of complimentary medicine.

We have had resounding success through one of Turning Points projects based at Southall, in dealing with cases of alcohol abuse and drug dependency. Out of 7 therapies offered Ayurveda had the second highest rate of results.

HIMALAYA DRUG COMPANY

Enriching Ayurveda through research since 1930

The company was founded in 1930 with a clear vision to bring Ayurveda to society in a contemporary form and to unravel the mystery behind this 5000 year old system of medicine. This included referring to ancient Ayurvedic texts, selecting indigenous herbs and subjecting the formulations to modern pharmacological, toxicological and safety tests to create new products and therapies.

The company has always aspired to put Ayurveda at par with modern medicine. To achieve this the company has a well-defined **Research & Development policy** :

It states that no investment is too much when it comes to scientifically creating safe products and therapies. Such a policy is not limited by a fixed research and development budget. This has helped the company to create a state-of-the-art Research and Development facility in Bangalore that is one of the best available for traditional medicine anywhere in the world.

All research conducted at the company is primary research (research and clinical trial on its *own* brands). This ensures that the formulations researched are the same as those made available in the final product to the consumer.

The research and development Centre at Himalaya has 10 separate departments that help it create new products and therapies. These include pharmacognosy, analytical chemistry, pharmacology, biochemistry, immunology, histopathology, microbiology, radiology, clinical pharmacology, and formulation and development. The centre has a full-fledged laboratory that enables it to test its products for toxicity and efficacy and determine their mechanisms of action. Foreign visitors from the pharmaceutical profession are often urged by Government of India to visit the R & D facility of The Himalaya Drug Company to see the level of research and the quality of analysis that an ayurvedic company is capable of. The head of R & D at Himalaya believes that they do as much, or perhaps more research on a new product, than most other pharmaceutical companies worldwide.

The formulations undergo multi-centered, double-blind clinical trials according to W.H.O. criteria to evaluate their efficacy and safety in diverse clinical situations (The company has over 300 clinical reports on Liv 52 alone, some of which were done under the aegis of prestigious institutions such as JJ Hospital, Mumbai, All India Institute Of Medical Sciences, New Delhi, National Institute of Virology, Pune, to name a few). Simultaneously the Development team works on standardising the formulations.

In the final analysis it takes an average of 10 years of research work for the company to introduce a new product to the market.

Research conducted by the company, is often published in international journals such as Japanese Heart Journal, Annals of New York Academy of sciences, Phytotherapy research (UK), Journal of Ethnopharmacology (UK), European Journal of Clinical Pharmacology (Netherlands), and, Drug News and Perspective (Spain).

Today the company's products are available in over 40 countries around the world including the US, Switzerland, Belgium, Holland and Russia. Liv 52, one of Himalaya's leading brands, is listed as a registered pharmaceutical product in Switzerland, as a medicine in Russia and as a health supplement in many other international markets.

THE AYURVEDIC CONTRIBUTION TOWARDS HEALTH IN THE NEW MILLENNIUM

We live in an age of amazing changes and growth in all fields of knowledge. The impact of these practical implications on the advances in science, technology, communication and humanities will have on us over the next few decades are difficult to conceive. The biggest challenge to be encountered will be the state of our total well being. Health and vitality of our physical, emotional and intellectual dimensions will largely decide the state of our happiness and usefulness in everyday life.

There is an urgent need for an intensive and comprehensive approach to total integration of our personality and lifestyle. The way to make this possible is simply by proper understanding of what constitutes our personality. We also need to know what generates, promotes and supports healthy mental attitudes, a wholesome diet, balanced physical activity and restful sleep so that it can be ingrained in our society. This approach is not new to Ayurveda, which comes to us via natural scientists (seers) through centuries of observation, experimentation, discussion and meditation.

Mankind's most ancient surviving medical heritage, Ayurveda, is a science of natural laws, understood and applied to explain this entire phenomenon of life and the universe. Every field of modern medicine as well as every alternate system of health care that works, does so because of these natural laws, expounded in detail by Ayurveda. The failure to fully grasp the principles that create and govern nature, is the very cause of failure that we often encounter in all fields of healing today.

Thus, Ayurveda expects us, as healers, to stop accepting this world phenomenon as it appears superficially to our senses. Instead it emphasises that everything we behold, inclusive of body and mind, is nothing but a play of the three 'forces' or states of 'energy', called doshas and commonly termed, by the ancient Greeks, as humors. A clear understanding of these triple doshas explains the human phenomenon of health and disease. The gentle or firm manipulation of these doshas according to the degree of imbalance, is not only possible but also very effective in restoring health.

Doshas, which give structure, integration, activity, direction and transformation, are called *Kapha*, *Vata* and *Pitta* respectively. These doshas are at play in all living things, which have a constant influence with cosmos. Within these beings, there is a unique ratio of these three "forces" (doshas) and their dynamic functions with a sense of contentment and usefulness in life, against all changes in one's environment. Simple, yet comprehensive, Ayurveda emphasises the harmony and vitality of the physical, emotional, cognitive and spiritual components of an individual. By understanding the predominance of the state of doshas (forces), in oneself and in one's diet, etc., preventive care can be incorporated into one's daily life. Diurnal, seasonal and other circumstantial adjustments thus become natural, when it comes to treatment. Emphasis is placed on the tendency in nature to seek renewed states of equilibrium, and all that is required, is an understanding of the overall factors that influence this dynamic play. Instead of

being lost an emphasis has to be on an appreciation of these doshic forces, which give momentum and direction to our physiology.

The principles of Ayurvedic " Panch Karma " (five techniques) are based on minimally invasive , but effective methods, of mobilising toxins from organs and deeper tissue to endothelial linings. Subsequently, using oil or water based vehicles, an effective removal of unwanted substances is executed across gut. The "Susruta Procedure" in rhinoplasty has earned this ancient Ayurvedic physician the title of "Father of Plastic Surgery". His work in orthopaedics, ENT, tumour and bowel surgery was no less formidable. Presently, in certain ano-rectal diseases, Ayurvedic surgeons have a good deal to offer to mankind.

Walking up to a new reality of holistic health care, mankind is realising the futility of fleeting pleasures and consequent suffering. As a solution, this ancient and well proven system presents guidelines for using all 'forces' of nature to influence tridoshic 'forces' to bring about health and joy for one and all.

Today, Ayurveda has gone beyond, incorporating modern changes like X-rays, and moving forward into the modern pharmaceutical industry. Some of our most effective liver remedies, and medication for depression, come from Ayurveda. Contemporary Ayurveda medicine tests for the same parameters as modern pharmaceutical products, transcending patient specificity to become ailment specific.

There are certain (groups of) Herbal drugs which are claimed to be effective in a range of refractory diseases such as Cancer, AIDS, degenerative & autoimmune disorders and also are considered to be effective in countering diseases associated with ageing, stress, and environmental factors. Heading this list are the rasayana groups of drugs of ayurveda. The rasayana drugs of Ayurveda are not mere herbal drugs, but are to be used on the basis of a unique Ayurvedic concept, which involves the psycho-neuro-immuno-endocrinal aspects of health and disease. The rasayana drugs are expected to delay ageing, combat degeneration, stress including environmental pollution etc. (Akin the present anti-stress, adaptogenic, immuno modulator, anti-oxidant concepts of modern medicine).

Taking into account the progress Ayurveda has made, both in terms of clinical evidence and continued research , it is applicable to contemporary health needs with the inherent benefits of traditional systems. Also, due to the preventative nature and cheaper medications, the cost benefits to the government would be substantial

**Effect of Liv52, A Herbal Preparation,
on Absorption and Metabolism of Ethanol in Humans**

Chauhan, B.L.

and

Kulkarni, R.D., M.D.,

R & D Centre, The Himalaya Drug Co., Bombay, India.

ABSTRACT

In 8 social drinkers the effect of a single dose of Liv.52 or placebo on ethanol absorption has been studied after ingestion of 30 ml whisky in 5 min. The $t_{1/2}$ absorption with Liv.52 was 3.62 min., significantly less than after placebo, 6.29 min. The peak concentration after Liv.52 (49.9 mg/100 ml) was significantly higher than with placebo (40.5 mg/100 ml).

Whisky 120 ml consumed by regular alcohol users in 1h, before and following 15 days of Liv.52 treatment produced significantly higher ethanol levels at 2, 3 and 4 h and significantly lower acetaldehyde levels at 3 and 4 h after Liv.52 treatment.

Liv.52 enhanced the rate of absorption of ethanol and rapidly reduced acetaldehyde levels, which may explain its hepatoprotective effect on ethanol-induced liver damage.

INTRODUCTION

Chronic alcohol consumption is a prime cause of liver disease.^{1,2} Present evidence indicates that acetaldehyde, the intermediate metabolite of ethanol, is directly injurious to liver.^{3,4} Significantly higher levels of acetaldehyde in blood are reported after ethanol ingestion by chronic alcohol users as compared to non-alcoholics, as a result of a primary reduction in hepatic acetaldehyde dehydrogenase activity.^{5,6} Acetaldehyde via its covalent binding to hepatic proteins may be the critical event leading to liver injury.⁴

Hepatoprotective agents of herbal origin have been available on the Indian market for many years and are regularly prescribed by physicians. Liv.52, a herbal formulation based on Ayurvedic principles, contains a number of hepatoprotective ingredients which are known to protect the liver from damage produced by toxic substances, including alcohol.⁸⁻¹¹

Using ¹³¹I-labelled Rose Bengal and a whole body linear scanner body segment counter, Harshe *et al.*, demonstrated reversible depression of liver function, even after a single episode of social drinking and the protective effect of Liv.52 (Harshe *et al.*, 1978, unpublished data).

The present study was designed to examine the effect of Liv.52 on the absorption and metabolism of ethanol in moderate and occasional drinkers.

MATERIAL AND METHODS

Twenty-five healthy male subjects with a mean age of 36.7 (± 2.95) y and mean weight of 59.2 (± 1.72) kg., volunteered for the study. After ascertaining the

history of alcohol intake they were classified as occasional, mild, moderate or chronic alcohol users¹². Their informed written consent was obtained.

Study of ethanol absorption

Eight mild to moderate drinkers, whose alcohol consumption was from 10 to 20 units/week, were enrolled in the trial to study the effect of a single dose of Liv.52 on the absorption of ethanol.¹³ On the first occasion, subjects received 6 tablets of placebo and on the second occasion after 3 days, 6 tablets of Liv.52 at 08.00h whilst fasting. Two h later and after collection of a fasting blood sample, 75 proof Peter Scot Whisky 30 ml, containing 44.8% v/v ethanol, was given with 70 ml chilled soda, to be consumed over 5 min. Further blood samples were collected 2, 5, 10, 15, 20, 30, 40, 60, 90 and 120 minutes after alcohol ingestion. Blood samples were immediately processed for ethanol estimation by a modified GC method.¹⁴ The method was validated by doing 10 replicates of the assay. The coefficient of variation was less than 3%.

Study of ethanol metabolism

The effect of Liv.52 on ethanol metabolism was studied in 17 subjects. Nine were moderate alcohol users who had consumed more than 20 units/week for more than 5 years and 8 were occasional drinkers.

Ethanol metabolism was checked by estimating the blood ethanol and acetaldehyde levels. In the fasting state, after the '0' hour blood collection, each subject consumed 60 ml Peter Scot whisky with 100 ml soda and 3 cubes of ice in 30 minutes, at 09.00 h. The next portion of 60 ml whisky was consumed over the next 30 minutes, i.e., between 09.30 and 10.00 h. Blood was sampled at 1 h, i.e., at the end of alcohol consumption and hourly thereafter for 6 h. A standard lunch was allowed at 12 noon. Blood samples were immediately processed for ethanol and acetaldehyde assay.

All subjects then took Liv.52, 3 tablets b.i.d. for 14 days, and on Day 15 ethanol metabolism was again studied by the same procedure.

RESULTS

The effect of a single dose of Liv.52 on ethanol absorption in mild to moderate alcohol users is depicted in Table 1.

TABLE1 : MEAN C_{MAX} T_{MAX} AREA UNDER PLASMA CONCENTRATION (AUC) AND $T_{1/2}$ ABSORPTION OF ETHANOL FOLLOWING INGESTION OF 30 ML WHISKY AND EFFECT OF SINGLE DOSE OF LIV.52				
Treatment	C_{max}	t_{max}	AUC mg. 100 ml min 0-120 min.	$t_{1/2}$ min
Placebo	40.5* ±3.99	17.5 ±0.94	2330 ±255	6.29* ±0.89
Liv.52	49.9* ±2.31	12.1 ±1.9	2330 ±249	3.62* ±0.54

Mean (SEM). Unpaired t test. * $p < 0.05$

The peak concentration of blood ethanol from 30 ml whisky was significantly higher and the rate of absorption was significantly faster after a single dose of 6 tablets of Liv.52 as compared to placebo treatment. The area under the plasma concentration

time curve (AUC) was not affected. The single dose of Liv.52 increased the rate of absorption of ethanol.

The mean ethanol level was significantly lower and the mean acetaldehyde level was significantly higher in 9 moderate alcohol users as compared to 8 occasional drinkers (Fig.1), indicating the induction of Phase I metabolism.

Following 14 days of Liv.52 treatment, the ethanol levels were 98.2 (± 5.39) and 98.2 (± 5.85) $\mu\text{g/ml}$ at 1 and 2 h in moderate drinkers, which were significantly higher than on Day 0. The rate of elimination of ethanol was not affected (Table 2). The mean acetaldehyde levels produced by 2 doses of whisky in moderate alcohol users before and after Liv.52 treatment are shown in Fig.2. Before Liv.52 administration, the mean acetaldehyde levels were 4.12 (± 0.50), 3.90 (± 0.67), 3.44 (± 0.73) and 2.63 (± 0.49) $\mu\text{g/ml}$ at 3, 4, 5 and 6 h, and they were significantly reduced to 2.58 (± 0.26), 2.10 (± 0.24), 1.73 (± 0.20) and 1.47 (± 0.19) $\mu\text{g/ml}$ respectively by Liv.52. $t_{1/2}$ elimination ($t_{1/2}$) of acetaldehyde was significantly shortened from 6.18 (± 1.68) to 2.79 (± 0.37) h ($p < 0.05$ unpaired 't' test). This suggests a faster rate of elimination of acetaldehyde after 14 days of Liv.52 administration.

TABLE 2 : MEAN BLOOD ETHANOL LEVELS (MG/100 ML) ON DAY 0 AND AFTER 14 DAYS OF LIV.52 TREATMENT FOLLOWING INGESTION OF 120 ML WHISKY BY MODERATE ALCOHOL USERS (N=9)

Day 0 time(h)	0	1	2	3	4	5	6	$t_{1/2}$ (h)
Mean (SEM)	0.00 ± 0.00	68.4* ± 6.61	76.9* ± 4.73	63.0 ± 2.47	63.0 ± 2.47	24.3 ± 3.38	24.3 ± 3.38	1.90 ± 0.14
Day 15 time(h)	0	1	2	3	4	5	6	$t_{1/2}$ (h)
Mean (SEM)	0.00 ± 0.00	98.2* ± 5.39	98.2* ± 5.85	75.2 ± 5.98	56.0 ± 4.38	29.8 ± 2.08	10.2 ± 1.78	1.98 ± 0.16
Mean (SE). Unpaired 't' test. * $p < 0.05$.								

In one chronic alcohol user, the lower ethanol levels and trend to faster elimination of acetaldehyde was confirmed on 5 occasions over 2 y following 15 days of Liv.52 treatment. The $t_{1/2}$ of acetaldehyde of 6.14 h on Day 0 was reduced to 1.74 h on Day 15. The effect of Liv.52 seemed to wear off 28 days after stopping the treatment.

The mean ethanol levels up to 6 h before Liv.52 treatment in occasional drinkers and after 15 days of Liv.52 treatment in moderate alcohol users are shown in Table 3. Although Liv.52 administration caused higher ethanol levels in moderate drinkers, they were comparable to those observed in occasional drinkers before Liv.52 treatment. Liv.52 seemed to normalise blood ethanol levels in moderate alcohol users.

TABLE 3 : MEAN BLOOD ETHANOL LEVELS (MG/100 ML) ON DAY 0 IN OCCASIONAL DRINKERS AND 15 DAYS AFTER LIV.52 TREATMENT FOLLOWING INGESTION OF 120 ML WHISKY BY MODERATE ALCOHOL USERS

	Time (h)	1	2	3	4	5	6
Moderate alcohol users (n=9)	Day 15	98.2 ± 5.71	98.2 ± 6.20	75.2 ± 6.34	56.0 ± 4.64	29.8 ± 2.21	10.2 ± 1.89
Occasional alcohol users (n=8)	Day 0	93.6 ± 9.87	86.4 ± 6.79	74.8 ± 6.25	57.8 ± 7.68	34.4 ± 7.92	19.1 ± 5.84

DISCUSSION

A single dose of Liv.52 increased the rate of absorption of ethanol, leading to earlier and higher peak concentrations. The increased level of ethanol produced by Liv.52 in moderate users might be due to an enhanced rate of absorption. Pre-systemic metabolism of ethanol has been demonstrated¹⁵ and its stimulation in chronic alcohol users is well documented.¹⁶ Herbal drugs have been shown to inhibit pre-systemic metabolism of other drugs and so to enhance their bioavailability.¹⁷ The effect of Liv.52 on absorption was more striking in moderate alcohol users, in whom there was evidence of enhanced pre-systemic metabolism of ethanol, and it had virtually no effect in occasional drinkers. The inhibition of pre-systemic metabolism following Liv.52 may be responsible for the higher ethanol levels.

Lower blood ethanol and higher acetaldehyde levels in blood have been reported in chronic alcohol users.¹⁸ This is probably the result of induction of the Phase I metabolism of ethanol, leading to faster acetaldehyde formation. This together with decreased Phase II metabolism, causes higher levels of acetaldehyde.⁷ Liv.52 caused higher ethanol and lower acetaldehyde levels in moderate alcohol users. It did not affect ethanol levels in occasional drinkers but it did significantly reduce acetaldehyde levels. The initial higher levels of acetaldehyde and their rapid subsequent decline suggests the possibility that the binding of acetaldehyde to a receptor or acceptor was prevented.

The unique action of Liv.52 in lowering the accumulation of acetaldehyde by its rapid removal may reduce the injurious effects of ethanol on the liver and possibly on the brain. This action of Liv.52 is most probably responsible for its hepatoprotective effect in alcoholic liver disease.

REFERENCES

1. Sherlock, Sheila (1975): Diseases of liver and biliary system, 5th edition, Blackwell, Oxford, p.449.
2. Donnan, S. and Haskey, J. (1977): Alcoholism and cirrhosis of liver. *Pop. Trends* 7: 18.
3. Harinasuta, U. and Zimmerman, H.J., Alcoholism Steatonecrosis: relationship between severity of hepatic disease and presence of mallory bodies in liver. *Gastroenterology* (1971): 60, 1036.
4. Barry, R.C. and McGivan, J.D. Acetaldehyde alone may initiate hepatocellular damage in acute alcoholic liver disease. *Gut* (1985): 27, 1065.
5. Sorrel, M.F. and Tuma, D.J. (1987): The functional implications of acetaldehyde binding to all constituents. In: Rubin, E.(ed), Alcohol and cell. NY Acad Sci. NY, p.50.
6. Korsten, M.A., Matsuzaki, S., Feinman, L. and Leiber, C.S., High blood acetaldehyde levels after ethanol administration - difference between alcoholic and non-alcoholic subjects. *N. Engl. J. Med.* (1979): 8, 386.
7. Jenkins, W.J. and Peters, T.J., Selectively reduced hepatic acetaldehyde dehydrogenase in alcoholics. *Lancet* (1980): 628.

8. Karandikar, S.M., Joglekar, G.V., Chitale, G.K. and Balwani, J.H., Protection by indigenous drugs against hepatotoxic effect of carbon tetrachloride- a long term study. *Act. Pharmacol. Toxicol.* (1963): 20, 274.
9. Saini, M.R. and Saini, M., Liv.52 protection against radiation-induced lesion in mammalian liver. *Radiobiol. Radiother.* (1985): 26, 379.
10. Majumdar, S.M. and Kulkarni, R.D., Paracetamol-induced hepatotoxicity and protective effect of Liv.52 *Ind. Practit.* (1977): 11, 479.
11. Joglekar, G.V. and Leevy, C.M., Effect of an indigenous drug on L.C.G. clearance and autoradiographic patterns in albino rats with experimentally induced hepatotoxicity. *J. Ind. Med. Prof.* (1970): 12, 74.
12. Shaper, A.G., Wannamette, G and Walker H., Alcohol and mortality in Britishmen: Explaining the 'U' shaped curve. *Lancet* (1988): 12, 1267.
13. The *J. Gen. Med.* (1988): 1, 1.
14. Mendenhall, C.L., McGee, J. and Green, E.S., Simple, rapid and sensitive method for the simultaneous quantitation of ethanol and acetaldehyde in biological materials using head space gas chromatography. *J. Chromatogr.* (1980): 190, 197.
15. Julkunen, R.J.K., Tannenbaum, L., Baraona, E. and Leiber, C.S., First pass metabolism of ethanol, an important determinant of blood levels after alcohol consumption. *Alcohol* (1985): 2, 437.
16. Holtzman, J.L., Gerhard, R.L., Eckfeldt, J.H., Mottonen, L.R., Finley, D.K. and Eshelman, F.N., The effects of several weeks of ethanol consumption of ethanol kinetics in normal men and women. *Clin. Pharmacol. Ther.* (1985): 38, 157.
17. Karandikar, S.M. and Dahanukar, S., Influence of Trikatu powder on rifampicin bioavailability. *Ind. Drugs* (1983): 20, 402.
18. William, J. (1984): Liver disorders in alcoholism. In: Rosalki, S.B. (ed), *Clinical chemistry of alcoholism*. Livingstone, New York, p.258.

(Auris l Nasus l Larynx (Tokyo), (1985): 12, 95.)

SEPTILIN and Geriforte in Allergic and Vasomotor Rhinitis

D.S. Grewal, M.S., B.K. Sharma, M.S.,

D.D. Shah, M.S. and J.H. Sheode, M.S.,

Department of Otolaryngology and Head and Neck Surgery,
Topiwala National Medical College and B.Y.L. Nair Charitable
Hospital, Bombay, India.

INTRODUCTION

Allergy is a specifically altered state of the host after contact with a specific allergen. Rhinitis is clinically defined as a condition with one or more symptoms of sneezing, running of the nose and nasal obstruction. If by experimental or clinical evidence, a tissue damaging allergic hypersensitivity process can be inferred as the cause of symptoms, then the rhinitis may be called as allergic rhinitis. The common allergens are pollen, house dust, milk, chocolates and drugs like aspirin; even over-use of nasal drops can lead to a type of allergic rhinitis known as rhinitis medicamentosa.

In allergic rhinitis there is a typical history of sneezing, rhinorrhoea and nasal pruritis with nasal obstruction. Nasal examination often reveals oedematous mucosa with bluish colouration; the turbinates may be hypertrophied and in extreme cases can even occlude the nasal cavities. It is frequently associated with nasal polypi and at times, even with bronchial asthma. On blood examination there may be eosinophilia and X-ray of the paranasal sinuses may show thickening of the mucous membrane of the maxillary antra. Skin tests may also be helpful in diagnosis but the results must be correlated with the history in order to be meaningful.

In vasomotor rhinitis there is abnormality of vasomotor control of the nose which is characterised mainly by nasal obstruction, running of the nose and sneezing. The state of the nasal mucous membrane is the resultant of two opposing forces, i.e., sympathetic and parasympathetic nervous systems. The sympathetic nerve fibres take origin from preganglionic connector cells which lie in the lateral horn of the grey matter of the first and second thoracic segments of the spinal cord. From here they go to the superior cervical ganglion. From there post-ganglionic fibres reach the plexus around the internal carotid artery and then to the deep petrosal nerve and the vidian nerve to reach the sphenopalatine ganglion. From here they go via the palatine and nasopalatine branches to the nasal mucous membrane. The parasympathetic supply comes from the superior secretory nucleus in the pons; from here fibres travel via the pars intermedia of the facial nerve, the geniculate ganglion, the greater superficial petrosal nerve and the vidian nerve to reach sphenopalatine ganglion. The post-ganglionic fibres from the sphenopalatine ganglion reach the nasal mucous membrane via the palatine and the nasopalatine branches.

Activity of the sympathetic nervous system tends to shrink the nasal mucosa along with dilation of the superficial vessels and hence the nasal mucosa appears pink. Activity of the parasympathetic nervous system tends to congest it, leading to engorgement of the venous

sinuses of the nasal erectile tissue, resulting in bluish colouration of the nasal mucous membrane.

Non-specific stimuli can act upon these autonomic nerves to cause reflex changes in the nasal mucosa especially over the turbinates and these stimuli are physical stress, emotional factors and endocrine imbalance which are common during menstruation and pregnancy and perhaps a physical factor like barometer pressure changes. Drugs like reserpine and methyldopa can lead to nasal stuffiness.

The diagnosis of vasomotor rhinitis is made by an increase in symptoms whenever there is stress and strain, absence of positive skin tests and seasonal variation. It is frequently associated with migraine and migrainous neuralgia. The nasal mucous membrane is usually pale or there is bluish colouration with hypertrophy of the inferior turbinates.

COMPOSITION

Each Septilin tablet contains:

Balsamodendron mukul	0.162 g
Maharasnadi quath	65 mg
Exts. Phyllanthus emblica	16 mg
Tinospora cordifolia	49 mg
Rubia cordifolia	32 mg
Moringa pterygosperma	16 mg
Pristimera indica	6 mg
Shankh bhasma	32 mg

Septilin (Himalaya) is a combination of herbomineral principles with a wide range of pharmacological actions.

Septilin has antibacterial and anti-inflammatory plant principles and is very effective in chronic infections of the upper respiratory tract. It also helps to build up resistance to infection in the mucous membrane. Septilin has marked anti-inflammatory and anti-exudative activity as demonstrated by the granuloma pouch method in experimental rats (Gujral, Sareen, Reddy, Amma and Santha Kumari, 1962). It also has a sterilising effect on the organisms associated with acute rhinosinusitis (Mehta and Naik, 1965). Balsamodendron mukul (Guggul-which is an oleo gum resin) has an action very similar to A.C.T.H. as it raises the general defence mechanism of the body and thus helps to overcome infective and inflammatory processes. It not only builds up resistance to disease but has the capacity to neutralise the causative factors. As an alterative, it is capable of normalising the deranged cellular metabolism. Phyllanthus emblica, another ingredient of Septilin, is the richest natural

source of ascorbic acid. This has an effect on the adrenal cortex and helps to build resistance to infection.

The presence of these two ingredients – Guggul and *Phyllanthus emblica* – in Septilin gave us an idea to use it in allergic and vasomotor rhinitis. Patients who had a history of stress and strain were given Geriforte (also of Himalaya) tablets in addition to Septilin. Geriforte has a mild tranquillising effect and helps to control anxiety and tension, which is at times associated with vasomotor rhinitis.

MATERIAL AND METHODS

Our study comprised 50 cases of allergic and vasomotor rhinitis. All these patients underwent thorough E.N.T. examination and all relevant investigations like:

(i) Blood examination for haemoglobin, total and differential counts and E.S.R. (ii) Urine and stool examination (iii) X-rays of the chest and paranasal sinuses.

Special importance was given to their history of stress and strain. A detailed interrogation of all the patients was done as regards stress and strain in their professional, family and married lives. The personality traits of the patients were also observed. All the patients with a history of stress and strain were given Geriforte tablets in addition to Septilin.

Dosage: (I) Septilin 2 tablets t.i.d. for 1 month or more depending on the response to the therapy. (ii) Geriforte 1 tablet t.i.d. for 1 month or more depending on the response to the therapy.

OBSERVATIONS

In our study we had 50 patients of allergic and vasomotor rhinitis. Seventeen patients gave a history of stress and strain. Hence they were given Geriforte in addition to Septilin.

(1) Age and Sex (Table 1). Allergic and vasomotor rhinitis are common during the third decade of life. We had 28 cases (56%) in this category; this was followed by the second and fourth decades with 11 cases each (22%).

Males were more affected than females (32 males, 18 females).

TABLE 1: AGE INCIDENCE		
Sl. No.	Age in years	Total no. of patients
1.	10-20	11
2.	21-30	28
3.	31-40	11

(2) Clinical Presentation (Table 2 and 3). Nasal discharge was the most common symptom (48 cases, 96%). Nasal obstruction was present in 46 cases (92%) and sneezing in 43 (86%) cases. Seventeen patients (34%) gave a history of stress and strain. Eight patients (16%) complained of headache and 2 patients (4%) complained of pain in the nose.

TABLE 2: SYMPTOMATOLOGY

Sl. No.	Complaints	Total no. of patients
1.	Nasal discharge	48
2.	Nasal obstruction	46
3.	Sneezing	43
4.	History of stress and strain	17
5.	Headache	8
6.	Pain in the nose	2

TABLE 3: CLINICAL FINDINGS

Sl. No.	Clinical findings		Total no. of patients
1.	Bluish colouration of the nasal mucosa		50
2.	Inferior turbinate hypertrophy		35
3.	Nasal discharge:		
	Mucoid	4	
	Mucopurulent	30	34
4.	Post-nasal drip		29
5.	Nasal septum		
	Right	22	41
	Left	19	50
	Central		9
6.	Septal perforation		1

On Clinical examination all the patients had characteristic bluish allergic nasal mucosa. Besides this, inferior turbinate hypertrophy was present in 35 cases (70%) and nasal discharge in 34 cases (68%). Of these 34 patients, 29 patients (58%) had post-nasal drip. Nasal septum was deviated in 41 patients (82%) and one patient had septal perforation due to a previous S.M.R. operation.

(3) Investigations - On examination of the blood, eosinophilia - more than 5% - was present in 46 cases (92%). Stool examination showed presence of ova of threat or round worms in 9 cases (18%), which were treated accordingly, as it is important to treat the worm infestation, if any, before starting the therapy.

X-rays of the paranasal sinuses showed haziness of both the maxillary sinuses in 4 cases (8%). These patients also had mucopurulent discharge in the nose with post-nasal drip; hence they underwent atrum puncture before starting the therapy.

(4) Results [Table 4, Figures (1a) and (1b) and Figures (2a) and (2b)]. These were judged after therapy on the following criteria: (i) Symptomatic improvement - in sneezing nasal obstruction, nasal discharge. (ii) Clinical appearance of the nasal mucosa - change in colour of mucosa from bluish to pink. (iii) Change in colour of nasal mucosa from bluish to normal pink along with symptomatic improvement was taken as good response.

TABLE 4: RESPONSE TO THE THERAPY					
Sl. No	Percentage of improvement in symptoms as judged by the patient	No. of patients	Percentage	Change of Colour of nasal mucosa from bluish to pink (No. of patients)	Percentage
1	100	39	78	39	78
2	75	8	16	2	4
3	50	3	6	Nil	Nil

TABLE 4(CONTD.)

Sl. No	Change of colour of nasal mucosa from bluish to bluish pink (No. of patients)	Percentage	No change in nasal mucosa	Percentage
1	Nil	Nil	Nil	Nil
2	5	10	1	2
3	Nil	Nil	3	6



Fig. 1: (a) Nasal mucosa before starting Septilin therapy. The nasal mucosa was bluish. (b) One month after the therapy the nasal mucosa became pink.

Fig. 2: (a) Bluish nasal mucosa with mucoid discharge, before starting the therapy with Septilin and Geriforte. (b) The nasal mucosa became pink with no discharge after one month of therapy.

Thirty-nine cases (78%) were cured 100% and they had total disappearance of symptoms and change in colour of the nasal mucosa from bluish to pink. Eight patients (16%) had about 75% improvement and 3 patients (6%) had only 50% improvement. These 11 patients were advised to continue the drug for a longer time, i.e., 6-8 weeks and of these patients, 4 patient showed further improvement.

(5) Side-effects—Initially for a week after therapy there was an increase in symptoms in 18 patients (36%). However, they were encouraged to continue the drug and then they responded to the therapy. One of these 18 patients complained of temporary giddiness lasting for 2-3 days at the start of Septilin therapy. We feel that the cause of giddiness may be blockage of the Eustachian tubes, as this patient had a temporary increase in nasal stuffiness with all the signs of Eustachian tube blockage.

Balsamodendron mukul (Guggul) is an important constituent of Septilin and is excreted by the skin, mucous membranes and kidneys. In the course of its excretion, it stimulates them and disinfects their secretions (Chopra, Chopra, Handa and Kapur, 1958). Because it is excreted through the genitourinary tract, at times it may bring on the first menstrual period much earlier than expected. For this reason and for safety's sake, Septilin which contains a large percentage of Guggul is contraindicated in pregnancy. However, the effect is only on the first period after commencing the drug. Thereafter, even periods which tend to be irregular, become regular.

CONCLUSION

Our study comprised 50 patients of allergic and vasomotor rhinitis. Seventeen patients gave a history of stress and strain, hence they were given Geriforte in addition to Septilin. The results of therapy were judged on the following criteria: (I) Symptomatic improvement. (ii) Appearance of nasal mucosa before and after the therapy.

Thirty-nine patients (78%) were cured 100% as they had total relief from symptoms along with change of the nasal mucosa from bluish to pink. Eight patients (16%) had about 75% improvement and 3 patients (6%) had only 50% improvement. These patients were advised to continue the therapy for a longer time (6-8 weeks). Of these, 4 patients showed further improvement. In our opinion, Septilin has proved very useful in cases of allergic and vasomotor rhinitis. Those patients who have a history of stress and strain may also need Geriforte in addition to Septilin.

ACKNOWLEDGEMENT

We are grateful to our Dean for allowing us to publish this paper and Dr. N.L. Hiranandani, Hon. Professor and Head, Department of Otolaryngology and Head and Neck Surgery, for his guidance.

REFERENCES

1. Chopra, R.N., Chopra, I.C., Handa, K.L. and Kapur, L.D. Balsamodendron mukul, Col. Sir Chopra's Indigenous Drugs of India, pp.2850287, U.N. Dhur & Sons Private Ltd., Calcutta, 1958.
2. Gujral, M.L. Sareen, K., Reddy, G.S., Amma, M.K.P. and Santha Kumari, G., Endocrinological studies on the Oleo Resin of Gum Guggul. Ind. J. Med. Sci. (1962): 16,847.
3. Mehta, B.S. and Naik, S.D., Chronic rhinosinal infection treated with an indigenous drug. J. Ind. med. Assoc. (1965): 45, 38.

Positive Health

The Principles of Ayurveda

Until fairly recently we thought we were living inside a static mechanical Universe which has been mulling about and around like an oversized Swiss cuckoo clock. We went to and fro in huge factories, had jobs for life and as steady citizens, had been looking forward to a gold plated watch and a secure pension. When we got sick we could expect the illness kicked out of our bodies with a huge wedge of wonder medicine. Illnesses were perceived as foreign to the body, enemy viral spy forces to be pushed and exterminated by a simple straight forward chemical agent dispatched from outside by an all knowing doctor. And all was well – until the Universe began to change right in front of our amazed eyes.

No longer is the world that simple or even made of firm matter. The Universe is a living thing, constantly changing and developing. It is much more complex, unpredictable and alive than we were led to think during the past hundred years. The more we studied matter the more we realised there is no such thing. The more we studied energy, the more we comprehended that energy is all there really is. The stuff that dreams are made of: one unbroken, constant vibrating field of energy of which we are but a part.

Illness began to look like an integral part of our state of mind and life style habits. In other words, we have seen the enemy and it is us. It took us merely five thousand years to realise that the truth has always been with us. An enormous contingent of modern scientists and their many expensive tools and instruments have only served to confirm this truth long ago laid before humanity by the ancient sages of Vedanta.

Ayurveda, The Science of Life

From the people who brought you yoga, meditation, reflexology and many systems of medicine comes Ayurveda, The Science of Life. Out of the field of constant



by Dr Liliana Stringer

tension between two essential principles: the conscious but undynamic Spirit and the unconscious but dynamic Nature comes the continuous creation of the Universe and All, and that includes you, and me.

The stranger than fiction life that unfolds before us from the perspective of modern science and ancient Vedic wisdom requires an active participation from mankind. The same principles that govern the progress of the stars and the planets rule our own progress through life. We consist of the Universe and vice versa. The philosophical system that is the basis of the Vedanta is not so difficult to understand because it rings a bell within everyone's soul. That the world is an alive and creative force has been the foundation of all known philosophical systems, including early science.

After all, we must not forget that those foundations have been laid down in the West by the Knights Templars who brought magical thinking back from the East. Science at birth was magic and the first scientists were the alchemists and magicians who often ended their days on the bonfires of the Inquisition.

The wisdom of Ayurveda was at the root of most of the known civilisations. The only problem with learning it is the same problem it shares with science: namely, it is full of jargon. Both Ayurveda and science

out of necessity rely on a heavy dose of the Sanskrit language on one hand and mathematical formulas on the other.

I have lately seen quite a few slightly confused people who keep looking for their doshas. They seem to be interested in Ayurveda, appreciate the wisdom of it and understand that it is becoming trendier every minute. But the oversimplification that has crept in with the newly founded popularity of Ayurveda tends to produce this confusion. Let's face it: Pitta, Vata and Kapha cannot be seen. They are forces not perceived by the eye. Only by the results of their actions on the body can we understand their workings. Additionally, in Ayurveda everyone is an individual. The mixings of the doshas vary greatly from person to person and what would be a perfect harmony and balance in one person between the three doshas could mean imbalance and disease in another. That is why it usually takes six years to learn the basics of Ayurveda and another four of practical work as a minimum to be a medical Ayurvedic practitioner. So the moral of the story here is to go and visit a qualified practitioner if you want to avail yourself of medical advice.

However, it is a science of life indeed. It is all about three things and I stress them: right life style, right life style, right life style; prevention, prevention, prevention; detoxification, detoxification and more

detoxification. Put simply: if you follow these Ayurveda principles you will never have to see a doctor or be concerned about your doshas. The doshas will go quietly about their business building and mending your body whilst you have fun living your life.

The Right Way To Approach Health

For everybody who begins to study Ayurveda their initial instinctive feeling is that this is the right way to approach health. Ayurveda talks about the infinite ability of humans to appreciate the world outside as part of ourselves and ourselves as a part of the world. It points our attention towards our senses and urges us to trust them. Did you ever have that gut feeling, that surge of intuition? It is there for a reason: to help and warn you. In the Western industrialised civilisation the essential requirement is for everything to be measured, weighed and analysed. We are not in control of our own existence as we have to rely more and more heavily on the machines that produce the print out of our life blood and less and less on our own God-given five or six senses.

Let's take an example. John Doe doesn't look well. His friends and colleagues realise it instantly. Mr Doe also knows that he is somehow not his usual self. However it takes a long time to be diagnosed by a doctor as an ill person. Mr Doe will have to make an appointment. The doctor will prescribe a painkiller or antibiotic - something routinely prescribed as a rule. Mr Doe gets no satisfaction from it. He has to make an appointment to see a specialist. It takes time to ascertain which specialist exactly. But it is not until some lab assistant somewhere far away will write to the specialist saying that his machines have found out that some cells in our friend Mr Doe's body do not behave as they should according to the test technique. The doctor at last has a right to say, "Well Mr Doe, my dear patient, there is something not quite OK here with you."

Between the first feeling of unease and the final tests confirming the morbid bodily changes a few years may pass. By this time it is too late to do much. The sad story continues for a while with the use of heavy chemicals and surgeons' knives and slowly the human spirit is extinguished. This is the usual situation with a lot of diseases.

What is Disease

But what is "disease"? A lack of ease to live fully? How can this be diagnosed? Who goes to the doctor just to say, "I am not my usual self"? Most of the time the doctor has no idea what the patient's usual self is. It is the industrialised nature of

health care that prevents both doctor and patient from discussing those small, undetectable, slow gradual changes that precede illness. In other words to avail yourself of the newest wonder drug you have to be already very ill indeed; and of course there is a huge industry of medics and multi-national pharmaceutical companies who rely on a steady supply of extremely ill people to continue their existence.

In the old days the best and most highly paid doctor was the one whose patients were never sick. Wouldn't that be nice? Just not too realistic. The whole point of the Ayurveda treatment is to detect these imbalances on a subtle energy level and correct them at the earliest stage. In the Charaka Samhita Vedic text the writer states, "Each individual is the unique expression of a recognisable finely tuned

that control the whole energy economy in living organisms. They always work as a team and one never appears without the others. Their interplay decides the objective condition of a living organism. A harmonious relationship of these three bioenergetic principles is the mark of good health. Any imbalance - and the equilibrium is very unstable - reveals itself in a wide variety of symptoms.

It would be a gross oversimplification to look for the predominance of a certain principle in a concrete individual. We are all in a constant flux of these energies - just like the Universe itself. Hence, sublime changes in the state of mind can and do influence the body's physiological make up to a great extent. To put it bluntly we can be as much poisoned by our uncontrolled negative emotions, as we can be by yesterday's soggy sandwich full of salmonella. This is why the first step in the Ayurvedic treatment would be to catch these energetic changes at the earliest stage. The Ayurveda talks about six stages

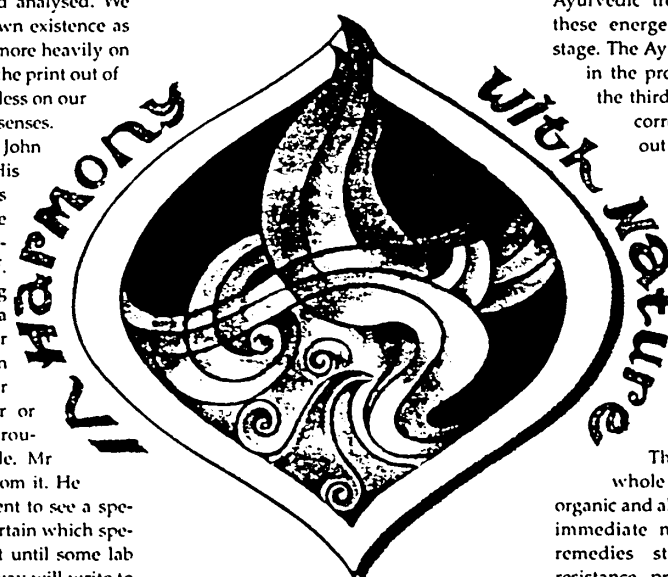
in the progress of the disease and by the third stage it is almost too late to correct the imbalance. So watch out for mood changes, strange thoughts and unusual food preferences - those are all early symptoms. And detoxify.

Treatment of the Whole Person on an Energy Level.

Those are the main features of the proper Ayurveda treatment: it works on the energy level.

The treatment works on the whole person, it is completely organic and all remedies are taken from the immediate natural environment. These remedies strengthen the powers of resistance, promote healing and have no side effect. Modern orthodox Western medicines represent just one "active ingredient" usually taken from a plant. That is why these active ingredients pack such a powerful punch and often knock the living organism for six, producing an adverse reaction we know as "side effects". In Ayurveda, the Universe, man in it and every living plant and animal are thought about as a symphony. Each note in this symphony is harmonically interwoven into a whole body of music. Now imagine just a few notes taken out of context, turned up to the highest level of sound and then repeatedly played again and again and again. How long could you stand such music, even if these notes were taken from the finest piece by Mozart?

Some two hundred medicinal Indian plants a year are being tested in research laboratories of multi-national companies. If it is possible to isolate an active principle from a plant extract, it is then chemically



cosmic process occurring in time and space." This is what is so special about Ayurveda: it makes no bones about assuming a direct, physical relationship between man and the Universe. There are five senses and five "building blocks of being"; these are called Mahabhutas. But I am distracted from my original idea to write in a simple, easy to understand way about what Ayurveda can do for you. As I said, it is full of jargon and very, very complicated and precise. Just like life itself.

It is due to this extremely highly developed sense of the direct correlation between all the elements of being that led to a concept of the Tridoshas. All matter is built on the basis of the Mahabhutas or the building blocks of existence; but only living matter has the Tridoshas, the three forces regulating all biological processes. These forces are not material. They are dynamic principles, the forms of energy

analysed to discover how the atoms of its component molecules fit together and then, after clinical trials, synthetic copies are put on the market as a new money-making product. It has nothing to do with genuine Ayurveda. Just a few weeks ago I read in a paper about the clinical trials carried out in strictest secrecy by an unnamed multi-national pharmaceutical company producing a medicine for Alzheimer's disease from an unnamed Indian plant. Wow, what a secret! It has only been in use for the past five thousand years in Ayurveda! Its name is *Centella asiatica* and it is commonly used by school children as it helps to strengthen memory. I use it myself even as I write, in the form of an Ayur tea.

However, the nature of modern industrialised and commercialised medicine is such that "money can only be made from a patentable new drug not from a natural remedy".¹ It is little wonder that in 1833 the East India Company having seen fit to give India the benefit of Western science, closed and banned all Ayurveda schools and opened in Calcutta the first University for Occidental medicine. That had something to do with slow progress of Ayurveda into the consciousness of Western people. We know of the Chinese herbal treatments, reflexology and aromatherapy but so painfully little about Ayurveda where all these treatments have their origins.

Ayurveda and the Digestive System

If Ayurveda is all about prevention and detoxification it is only natural that the closest attention is given in Ayurveda to the digestive system. That is where the most important action of the exchange between our environment and our body takes place. We are indeed what we eat, as we eat our way through life nutrients and matter itself are taken into one end and after being transformed into our living body depart through another end. Should such a process be disrupted the end result will manifest itself as an illness. However, in today's world, most of the matter we consume is artificially made. The majority of Western food including fruit and vegetables is full of chemicals that come from factories, not from the earth. It is very difficult to underestimate the effect of such foods on present and future generations. Following the logic of the market place we can come to the conclusion that only genetically modified people can consume genetically modified food. Weird or what? We just have to wait and see whether all these strange ideas will become a reality. In the meantime however, we have to attend to our own health in the best manner possible.

It does not do us any good that we are living in an artificial world for which we are not as yet equipped. The way we humans developed was through evolution



Sinharaaja: virgin rain forests of Sri Lanka

in a natural environment. We are made to hunt and forage for food and our bodies are designated for the stresses of the jungles. Today we find ourselves in an unnatural world made-to-measure for machines more than for humans. It is no great surprise that we find it so hard to survive in the big cities. Look at the modern diseases, most of them are the result of secluded, sheltered, comfortable living. It is the same with wild animals; if placed in a zoo they will develop stress, depression and excessive interest in sex or the contrary, they will not be able to reproduce normally. We are meant for a much harder existence. Some of our faculties may begin to suffer atrophy in too cosy surroundings.

Of course, Ayurveda is a product of very different times, when the food we ate was taken from an earth not yet polluted by various chemicals. That is why food and medicine are not separate entities in Ayurveda. The wrong food for your type will harm you and the right one will put you straight. Basically, all Ayurveda products are ingredients of the food chain. A few days ago I visited a wonderful Ayurveda restaurant in London. I had a delicious starter of Aralu fruit (*Terminalia chebula*). It is an essential part of the classical Ayurvedic remedy for improving the digestion: Threepala. This is one of the oldest remedies in the world and does wonders for controlling the blood sugar and pacifying the appetite. It has been used for thousands of years in the treatment of obesity and you also don't experience a proper hang-over if you use it; it detoxifies the liver very fast. So, food is both a nutrient and a medicine. Ayurveda is based on this thought. The famous Panchakarma treatments can be summed up as detoxify, detoxify, etc. - five times through all available means. All means will include the use of plants.

There is a lovely story in the Ayurveda scriptures about a young man aspiring to become an Ayurveda practitioner. The medical school he wants to attend is a very famous one and the competition for places is fierce. The future students must go through a variety of difficult assignments in order to be accepted. One of these tests is to go into the wilderness and find one plant that would be useless for medical purposes. One by one they disappear into the forest. One of them spends hours there and comes back with an unattractive weed. Another returns after a couple of days and brings back some poisonous berries. But one student went missing for the whole week and came back empty handed. He went on to become a famous doctor.

The Story of Pepper

Take the story of ordinary pepper. There is no doubt that this spice has made the deepest mark on human history. In the Middle Ages more value was placed on a sack of pepper than on a human life. Pepper was and still is a most important spice on the world market. It was the most expensive commodity, carried along caravan routes, it played a significant part in many trade wars for instance the struggle for supremacy between Venice and Genoa and it was a prime economic motive in the search for a sea route to India. Its high price inevitably led to adulterations of the powdered form and even today it is advisable to buy whole peppercorns. Black pepper is "dry", therapeutically it is heating, and its digestive product is pungent. In general, pepper suits those who display the characteristics of Vata and Kapha but not those with a predominance of Pitta.

Pepper sharpens the appetite and improves the digestion and it also helps to expel wind. The essential oil is absorbed by the lungs and thus reduces discomfort in

pharyngitis and tonsillitis. To treat those complaints, powdered pepper is mixed with honey and taken three times a day. When stirred into hot milk it can be used for bronchitis, sore throats and head colds. Pastes and oils containing black pepper are used for rheumatism and skin diseases. A hot decoction of black pepper is an effective mouthwash for toothaches. Pepper is also sudorific and resembles quinine in action. In fact, a mixture of pepper, ginger and honey is prescribed for malaria. In small doses Piper cubeb is dispensed for disorders of the urinary passages. Long pepper is given to children suffering from diarrhoea, coughs, fever and bronchitis; it is added to the diet of mothers to assist contraction of the uterus following childbirth.

Building Healthy Houses

All the Ayurvedic remedies are multifunctional. The above mentioned Threepala is used mainly in Kapha and Pitta disorders. It is beneficial for diseases of the kidney and bladder, diabetes, skin conditions, eye complaints, intermittent fevers, loss of appetite, constipation, dysentery as well as improving iron absorption. And you can eat it! This is the overall picture of Ayurvedic thought. There are so many aspects to this wonderful science of life that I can't possibly even begin to scratch the surface of this vast body of knowledge.

temperature so high he had begun to hallucinate. Consequently we were both so impressed we asked the main manufacturers of Ayurvedic products in Sri Lanka to produce some such remedy for us. All the remedies we bring over from Sri Lanka have been tested on human volunteers; ourselves and our friends and relatives. One of the Ayurvedic oils has proven to be a decisive factor in my daughter's eczema. The child has been plagued with it since she was four years old; every time she goes through stress she develops horrible weeping blisters. Now at last this has stopped happening.

Arishtas are elixirs or tonics that are prepared by using mixtures of appropriate herbs fermented with natural cane sugar for 45 days in large teak vats. They taste great and contain natural food vitamins in an easy-to-absorb solution. The thing about vitamins, you see, is that while they are very necessary for our day-to-day survival, they work best when they come into the body as part of food, not as a synthetic foreign material.

Ayurvedic Holidays

One of the best presents you can give your body and soul is an Ayurvedic holiday. Imagine two weeks concentrating on Number one - you owe it to yourself to take care of your body. This is exactly what you'll be doing on an Ayurvedic

But, to summarise briefly, Ayurveda is so comprehensive as to include the rules for building "healthy houses". All the Yoga Asanas come from the Ayurveda schedules. Great attention is paid to the season to avoid congestion in any of the Doshas particularly active at any given time of the year. But above all, the great significance of this system lies in the fact that it is a road to self-development that stresses physical, spiritual and mental health. The value of preventative medicine of this kind in attaining all round well-being is obvious.

Health is a variable condition and depends not only on body but also on the entire personality. Health lies within us and not in a drug store. There is no way of achieving well-being of body and mind through intravenous injections. It is gained by making the best of life's ups and downs, by adopting a sensible regimen, by deliberately relaxing when stressed out, by cultivating harmonious human relationships and finding life meaningful.

The True Healer is Within Us.

Ayurveda knows many simple, natural preventative measures for keeping the body in trim. According to Ayurveda, mental and physical health can be preserved merely by attentiveness; attentiveness to how we use our senses, adapt our daily routine to the demands of



our environment, plan our diet and respond to internal and external rhythms. The object of Ayurveda is to assist nature. All the means used for cures do no more than support natural processes, they do not irritate nor do they suppress nature or substitute what the body can do for itself.

There are simple tried and tested remedies that act mostly as prevention. For example, the excellent cold and flu remedy Lakpeyawa consists of nothing more than a mixture of ginger, coriander, long pepper, Indian night shade and Jacquin's night shade. However, it is so powerful that when we were living in Sri Lanka and my boyfriend contracted dengue fever, this remedy put him right in just two days, despite having a

References:

1. Dr Tim Mitchell, Dr David Paige, Dr Karen Spowart. *Eczema and your Child*, Class Publishing, pg 91.
- Vernon Coleman, *Bodypower*, The European Medical Journal, Publishing House, 1999.
- Bright Mayn, *Ayurvedic Medicine: The Gentle Strength of Healing*, Thorson Publishing Group 1987.

About the Author

Dr Liliana Stringer, PhD., MA, BA, UK CPH (Dip), MPNLP, BMA is Russian in origin and has trained in psycho-hypnotherapy, NLP and homeopathy.

She studied Ayurveda under the guidance of Dr Aleem Moulana, Head of Unani Department, General Hospital (Ayurveda), Borella, Colombo. She studied native herbalism and the Ifa (West African original philosophy) in Nigeria.

She now heads Ibis International Corporation, a company dedicated to the promotion of Ayurvedic principles, importing Ayurveda Products from Sri Lanka. She is on the board of the Ayurvedic Trade Association UK. She can be contacted on 0171-286 3326.

This article was originally published in *Positive Health*-October 1999, Issue 45. For further information: Tel: 0117 983 8851

or www.positivehealth.com

And then I could very confidently say: "To your best health!"



11-13 Cavendish Square
London W1M 0AN

Tel 020 7307 2400
Fax 020 7307 2801
www.kingsfund.org.uk

Treasurer
William Backhouse

Chairman
Sir Graham Hart KCB

Chief Executive
Rabbi Julia Neuberger

PUBLICATIONS ON AYURVEDA AVAILABLE FROM THE KING'S FUND BOOKSHOP

Two publications written by eminent Sri Lankan experts on Ayurvedic Medicine are now on sale at the King's Fund Bookshop-

BUDDHISM & TRADITIONAL MEDICINE IN SRI LANKA

This book((ISBN 9559044354 – published by Kelaniya University Press - £20.00) written by **Professor Jinadasa Liyanaratne** of the South Asia Institute in Paris was released in time for the King's Fund seminar on '*Buddhism & Ayurvedic Medicine*.'

THE HANDBOOK OF AYURVEDA

Published by Kyle Catchie Ltd in the UK (ISBN -1-85626-223-5 / £9.99), this book has been written by **Dr. Shantha Godagama**, President of the Ayurvedic Medical Association of the UK who also participated in the King's Fund seminar.

Both books could be ordered from: Carla Morris, The King's Fund Bookshop, 11-13 Cavendish Square, London W1M 0AN. Telephone: 020 7307 2591.

For further information please contact:

Ivan Corea
Development Fellow, King's Fund
Telephone: 020 7307 2627



This article was originally published in Positive Health - October 1999, Issue 45. For further information Tel: 0117 983 8851 or www.positivehealth.co.uk

