Stomach Disorders Can Sound Alert On Fluorosis

By T.V. Padma

T is no longer necessary for a crippled and deformed person to limp into a clinic before doctors can diagnose that he is suffering from a chronic case of

Recent research on fluorosis at the All India Institute of Medical Sciences (AIIMS), New Delhi, shows that non-ulcer dyspepsia, a common gastrointestinal symptom is one of the earliest signals that can alert doctors to the possibility of emerging fluorosis.

"This information has now emerged as a blessing for those dealing with fluorosis and its control programme in endemic areas," said Dr AK Susheela, professor at the department of anatomy at AliMS, and coordinator for fluorosis control activities of the National Drinking Water Mission.

Gastrointestinal complaints, such as loss of appetite, nausea, vomiting, pain in the stomach, gas formation, constipation and intermittent diarrhoea trigger the suspicion of fluoride toxicity, Dr Susheela told a recent seminar on problems, of fluorosis organised by the Institute of Social Sciences, New Delhi.

To a great extent, the patients are relieved of their symptoms once they are di-

RAQ's children are dying.

The mortality rate for

under-five-year-olds in

post-war Iraq has nearly

quadrupled stince before the

Gulf War. More than 900,000

children are considered main-

ourished, with 118,000 said to

be at greater risk of death than

independent study team of 89

doctors, public health experts,

electrical and agricultural

engineers, sociologists, psy-

chologists and environment

specialists from around the

world. The team visited Iraq in

August and September to

assess the impact of the Gulf

War on the health and welfare

These are the findings of an

before the conflict.

verted to safe and potable wa ter, and advance of the disease culminating in a crippled and vegetative life is checked in

The findings were also presented at the All India Gastroenterology Society meeting in Trivandrum in the first week of October, and are scheduled to appear shortly in the British medical publication "Journal of Clinical Pathology".

The results emerged after a series of field surveys and clinical studies in which a majority of patients complained of gastric pains and nausea both before an after skeletal deformities that typify fluorosis. Gastric complaints are not

normally associated with the

In many cases, patients with skeletal fluorosts first went to a gastroenterologist with complaints of loss of appetite, flatulence and constipation which they found to be more discomforting than bone pain and stiffness.

This prompted the AIIMS investigators to launch a study on 10 patients with osteosclerosis who were receiving sodium fluoride therapy of 30 mg per day for three to 12 months, and 10 healthy controls of the same sex and age

During the trials the AIIMS team examined the patients, using ultrasound and gastroin-

'Super Vaccines'

Child Deaths and Malnutrition

Soar in Post-war Iraq

frastructure.

Development Programme are supporting promising research on methods to encapsulate multiple vaccines into time-release, injectable microcap-

Made from biodegradable polymers, the microcapsules release the entrapped vaccines at different times after injection. It mimics repeated booster shots by delivering two

nearly banished from Iraq -

are re-emerging due to insuf-

ficient immunisation pro-

grammes and poor sanitary

conditions. (An earlier United

Nations report by Sadruddin

Aga Khan found that medicine

available to Iraqis from August

1990 to July 1991 was enough

to satisfy only 35 per cent of

finding indicates that child

mortality for under-fives in the

period from January to August

of this year increased by 380

health specialist who helped

write the report, said: This is

one of the most comprehen-

Dr Eric Hoskins, a public

per cent from a year earlier.

The report's most startling

civilian needs.)

The WHO and the UN or three shots of vaccines spaced over months.

The first one-shot, controlled-release vaccine is now being developed against tetanus. Immunisation against tetanus currently requires three injections to prevent newborn tetanus.

Work is underway to prepare measles vaccines which can be given to children at six months of age instead of nine

bombing for the crippled in-

More than two-thirds of

Iraqi water supplies tested by

the study team are contami-

nated, according to Hoskins,

while in the south, 60 per cent

of households now have no

running water at all. In south-

ern hospitals, 30 per cent of

running water is severely pol-

been restored to 37 per cent

of pre-war capacity, but the

system is expected to deterio-

rate because of missing spare

parts and failing equipment.

The lack of electricity has had

Iraq's electricity supply has

testinal endoscopy in which biopsies were taken from the gastric cavity and duodenum. The doctors also estimated the fluoride concentration in the serum, urine and drinking

Of the 10 patients on fluoride therapy, seven said they had abdominal pain, vomiting and nausca. Endoscopy on all patients showed erosions and erythema (localised redness). The controls, however, showed no abnormalities.

Doctors also found evidence of histological changes in the stomach wall during biopsies and electron microscopy stud-

In addition to gastrointestinal symptoms, fluorosis can affect other systems, such as the neurological system (leading to nervousness and depression), muscular system (causing muscle stiffness, weakness and pain), the skin which shows allergic reac tions, and the urinary tract which results in reduced and dicoloured urine.

Patients with skeletal fluorosis have severe joint pain and stiffness and are usually unable to bend down without folding the knees, have difficulty in touching the chest with the chin and cannot stretch the hand, fold the arms and touch the back of the

Whereas Iraqi agriculture

supplied 30 per cent of do-

mestic food needs before the

war, it now meets only 10 to

15 per cent of needs, the re-

and inflation has skyrocketed,

but salaries have remained the

same. With inflation at 1,500

to 2,000 per cent, typical

monthly Iraqi wages are now

barely enough to provide three

weeks of infant milk formula

for one child - and then only

if no one else in the family

ket which cost 66 dinars be-

fore the war now costs 1,000

dinars. Because of a collapse in

A typical family food bas-

Unemployment is soaring

port says.

In dental fluorosis, seen in children in endemic areas, the teeth turn dull, yellow and ultimately black, besides chip-

In India, drinking water alone is the major source of excess fluoride intake as most of the states are rich in fluoride-containing minerals.

The fluoride ions seep into the ground water from these deposits and thence into natural drinking water supplies such as lakes, springs and

Fifteen states in India are endemic to fluorosis which afflicts almost 25 million people. with an equal number of pcople estimated to be at risk. The states include Andhra Pradesh, Bihar, Gujarat, Haryana, Karnataka, Kerala, Jammu and Kashmir, Madhya Pradesh, Maharashtra, Orissa, Rajasthan and Tamil Nadu.

Doctors say the optimal fluoride concentration in drinking water should be 0.7-1.2 mg per litre depending on the climate. The World Health Organisation advises that the fluoride concentration should be less in hot countries where more water is consumed, while in cold countries with lesser intake of water, the fluoride concentration should be

HIRD World countries are trying to get toge ther to preserve what is left of potentially-valuable medicinal plants and herbs that are threatened with extinction because of the destruction of their rainforests.

Even a health conscious people turn from synthetic drugs to natural remedies, the destruction of tropical rainforests may be leading to the extinction of valuable medicinal plant species.

Genes that encode the characteristics of all living things from the drought tolerance of barley to the colour of a baby's eyes, are the raw material for the biotechnology industry as well as for today's plant and animal breeding industry.

Nearly half the world's plant species occur in developing countries where rainforests are threatened. Scientists reckon that a quarter of the species will be lost in the next 20 years. Current extinction rate is estimated at 1,000 plant species a year.

Members of the Group of 15 Third World countries (G-15) met in New Delhi this month to finalise plans for the gene bank.

The G-15 includes, Algeria, Argentina, Brazil, Egypt, India, Indonesia, Mexico, Malaysia, Nigeria, Peru, Venezuela, Yugoslavia and Zimbabwe. Experts from these countries are trying to find out how they can help each other use traditional medicine.

The New Delhi workshop was in preparation for the summit meeting of the G-15 in the Venezuelan capital Caracas in November.

"Solar energy and medicinal plants are two resources that are abundantly available in the South," said Frank Bracho, Venezuela's ambassador in India who is involved in the G-15 Summit preparations.

Roughly 35,000 known plant species have medicinal value, and according to the World Health Organisation (WHO), about three quarters of the world relies on medicinal plants for primary health care.

"Over 700 medicinal compounds in modern western pharmacopcia are derived from plants. The retail value is around US\$ 50 billion. It is a huge trade that has quadrupled over the 1980's. But the South is not reaping the benefits," Bracho added.

In the past, biological prod-

WELLINGTON: The pres-

ence of fluoride in water sup-

plies has significantly reduced

the amount of tooth decay in

children, a recent survey here

five-year-old and 413 14-year-

olds showed a reduction in de-

response to conflicting evi-

dence about the presence of

fluoride in the water supply

reduced the amount of tooth

decay in children, said Dr

Elizabeth Treasure, lecturer

Otago University's department

were from four towns - two

with fluoridated water supplies

and one without fluoridation.

Fluoride was removed from the

fourth town's water supply in

more children had never had

The recent survey showed

The children examined

cay of at least 45 per cent.

fluoride in water.

of community health.

1985.

Clinical examinations of 342

The study was conducted in

It confirmed the view that

has fond.

had a history of these diseases and who traditionally consume about a quarter the amount of fat that US citizens do, have now been shown to be facing the adverse effects of fast-food and fatty dicts.

Fast-Food Attack

The worldwide fascination for the US fast-food diet,

aggressively pursued by US chains, may have

considerable health risks, experts warn. Ellen

Drought of IPS reports.

LONG with blue jeans

and popular music,

A ast-food chains are

among the most popular items

of US mass culture exported

McDonald's Corp., consid-

cred the traff blazer in the US

3,355 units in 53 countries.

according to the US-based

Union are the more recent

subjects of the 'Mac attack'. In

the widely televised opening of

McDonald's in Moscow's Red

Square, Soviets formed long

queues to get a real taste of US

billion fast-food industry in the

United States, Business Week

notes that what growth there

is for a company like

McDonald's comes largely

McDonald's restaurants over-

seas will surpass those of the

domestic outlets, analyst

ceived in Europe, Asia and

fast-food diet carries a health

risk for overseas consumers

aged consumption of the ubiq-

uitous burgers, fries and

shakes. Such foods have high

fat content, and have been

linked to the high rates of

heart disease and cancer in

The Japanese, who have not

US nutritionists have discour

Franchises have been re-

But the import of the US

Steven Rockwell says.

By 1995 or so, profits from

With a glut in the US\$74-

capitalism.

from abroad.

Latin America.

the United States.

The people of the Soviet

Business Week magazine.

throughout the world.

A recent study said cancer fast-food industry, now has and heart disease rates have risen in Japan as a result of the introduction of US fast food. Guidelines set by the US

Department of Agriculture suggest that no more than 30 per cent of a food's calories should come from fat.

Healthy adult eaters should consume no more than 60 grammes of fat a day, and recommended doses are far

The most popular entrees at fast-food restaurants get 40 to 50 per cent of their calories from fat. One hamburger can supply up to half the total daily recommended dose of fat.

Confronted with increasingly health conscious consumers, fast-food restaurants here have recently made efforts to adapt their menus.

Early this year, McDonald's introduced a 'Mclean' hamburger, which was advertised as "91 per cent fat free", and which uses a seaweed extract to replace beef fat. It is said to have 50 per cent less fat than other hamburgers, or only 10 grammes. This however does not include the fat and calories from the hamburger's trimmings and bun.

Only last year, three major US chains, including

McDonald's, Burger King and Wendy's, announced they were climinating beef tallow - an important source of fat - from their hamburgers.

McDonald's also offers salads, muffins and carrot sticks in addition to traditionally high-caloric fast food. There is also an attempt by the food chain to capture the ethnic market with items like the Mexican chicken 'fajitas'.

Kentucky Fried Chicken, another franchise with substantial overseas expansion, has also taken a more healthconscious approach, offering chicken without skin, with lower fat and sodium.

But gramme-for-gramme, the chicken offers the same amount of fat as previous offerings. The new chicken simply weighs less.

The drive for healthier fastfood is one response to what many business analysts see as a saturation of the market. In 1980, there were an estimated 100,000 fast-food franchises in the United States.

In 1990, there were 140,000, according to recent reports, which largely credit the increase on the move towards more nutrition-conscious consumers. But, given that degree of saturation, the industry is widely believed to be entering a slump at home.

This is also partly behind more aggressive efforts to expand fast food abroad, particularly in developing countries.

eight in all, deal with child mortality rates and psychology, health facilities, water and electrical supplies. As Gemini News Service reports, a growing problem is the shortage of spare parts and supplies to repair the country's shattered infrastructure.

Jan -July 1991

of civilians.

Their 250-page dossier, a collection of eight reports made public in London, paints a gripping picture of the horrifying conditions in a war-shattered Iraq. The team describes a dete-

by Rula el-Rifai

riorating economy, a desperate need for food and medicine and a lack of spare parts to repair heavily damaged electricity, water purification and sewage systems.

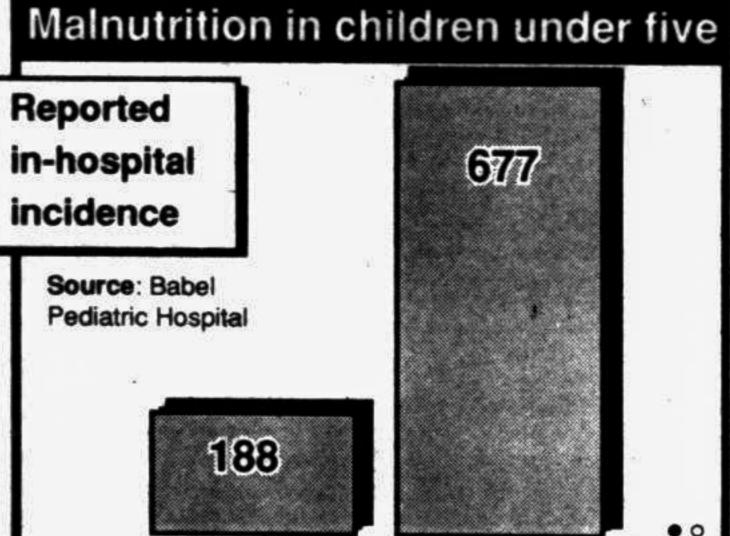
"Unless Iraq quickly obtains food, medicine, and spare parts," says the report, millions of Iraqis will continue to experience malnutrition and disease. Children by the tens of thousands will remain in jeopardy. Thousands will die."

The team was composed of academics from Harvard University in the United States, Oxford University and the London School of Economics in Britain and the Dutch University of Nijmegen. It was financed mainly by two private organisations - the John Merck and MacArthur foundations - and the British branches of Oxfam and the United Nations Childrens' Fund (UNICEF).

The report's authors visited 9,000 households in 265 communities scattered throughout Iraq's 18 administrative divisions. Researchers went to 29 hospitals, 17 health community centres, 24 electrical facilities and 28 water

and sewage treatment plants. They found that Iraqi hospitals and clinics typically function at less than 30 per cent of their pre-war rate and lack basic resources such as syringes, anaesthetics, antibiotics and surgical supplies. Drugs to treat chronic illnesses such as diabetes and heart disease are not found at all. Non-emergency surgery has been cancelled for a period of 12 months.

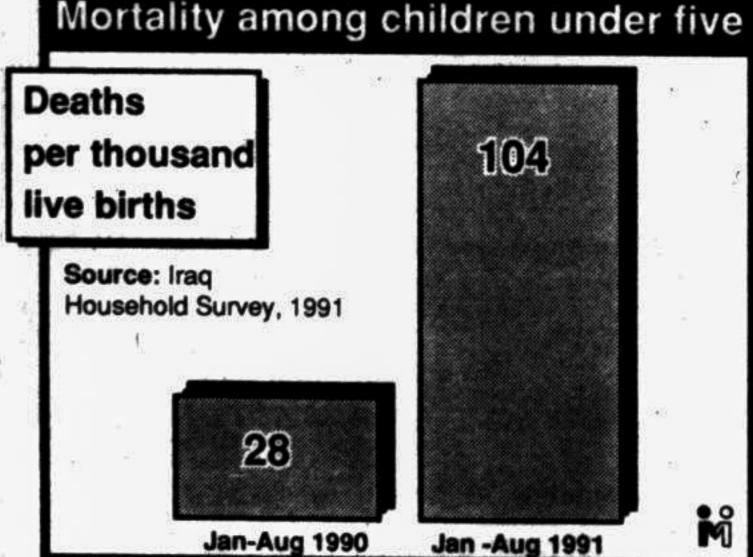
Water-borne diseases such as typhoid, cholera and hepatitis are thriving. Preventable childhood diseases such as measles and tetanus - once



An international study team of doctors, economists and academics has returned

from Iraq with shocking evidence of the impact of the Gulf War. Their reports,

Jan-July 1990



sive studies on post-war Iraq One year of sanctions, war and internal distrubances continue to have devastating effects."

The near collapse of Iraq's public health system, resulting in a tragic increase in infants deaths, has been caused by crippled water purification and sewage treatment systems. Economic sanctions — and a resulting lack of spare parts, chlorine and electrical supplies - are more to blame than

a devastating impact on the operation of hospitals, water treatment and sewage systems, causing an increase in water-borne diseases.

Food production has been badly hit too, since the country's main fertiliser plant was destroyed by bombing, leading to acute shortages. Iraq's livestock and fish - both vital food sources — are dying because of polluted water and a short supply of veterinary medicine.

buying power, real income for Iraqis is now only seven per cent what it was before the

Many families have used up their savings and are now reduced to selling off personal items just to buy basic consumer goods. And with winter approaching, expenses for things like clothing and fuel are bound to rise.

Magne Raundalen, a child psychologist, says 75 per cent of children he examined no longer take any joy in play and are still highly traumatised and haunted by the war. Eighty per cent still fear losing their families. They are like "the living dead," he says.

Hoskins says the team has chosen not to make recommendations in their report Instead they will leave it up to the media and international community to take action. The document was to be submitted to the Sanctions Committee of the UN Security Council and to the Secreatry General, the US State Department, the International Court of Justice in the Hague and other international bodies.

Economist Jean Dreze of Essex University, a member of the team, says the findings show "Iraq is going now through a process of underdevelopment.

Robert Smith, UK director of UNICEF, has renewed his organisation's appeal to cover the \$50-million shortfall in UNICEF emergency assistance for Iraq. "We have to find a way of putting children first," he

Saddam Hussein's "mother of all battles" may be long over, but its offspring - death, poverty, hunger and sickness linger.

- GEMINI NEWS | tooth decay in the fluoridated

A Third World Gene Bank

Third World countries are getting together to set up a gene bank that will preserve medicinal plants threatened with extinction because of the loss of rainforests. Astri Ghosh of IPS reports.

ucts and processes were not cligible for intellectual property protection.

But major drug companies in the north are lobbying in international negotiations for patent and other property rights on drugs derived from resources of the Third World.

Third World countries may

The study also showed so-

cially-disadvantaged children

had more tooth decay. But they

had better teeth in the fluori-

dated areas than socially-dis-

advantaged children in the

troversial issue since it was

introduced in New Zealand

Fluoridation has been a con-

non-fluoridated areas.

dental decay.

end up paying new royalties for products developed from their own resources. The vast biological diversity

of the Third World could become the intellectual property of private interests, some experts have warned.

In the west, where extracted natural resources are treated as commodities, plant germplasm has been defined as "the common heritage of mankind", for which no payment is necessary or appropri-

For over two centuries, scientists from the advanced industrial nations have freely appropriated plant genetic resources from Third World forests for use in the plant

breeding and improvement programmes of the developed world. The South has begun to

protest that while its genetic

resources are seen as freely available, seeds from Western companies seen as "private property" and have to be purchased. "If we are to claim our right

share, a gene bank comes in handy both for the preservation of species, and (monitoring) technical cooperation," Bracho added. In traditional systems of

medicine, wild herbs and plants are used in all remedies. Till recently, about 1,000 different medicinal species used in India grew wild in forests. Bút many varieties of herbs

and plants have disappeared as virgin forests have been cleared for commercial purposes and for agriculture, or destroyed by fire or pests and parasites.

As forests vanish, their indigenous inhabitants have also been displaced.

Scientific Claims water supplies in the 1960s. Recent surveys have shown Fuel NZ debate

Local councils are responsible towns. In the non-fluoridated communities more children for deciding whether to fluorihad experienced more tooth dated water supplies.

Over Fluoride

Fluoride is present in varying amounts in all soils, plants, animals and water supplies. Seafoods and tea contain relatively high levels. Water fluoridation is the process of adjusting the amount of fluoride that occurs naturally in a community's water supply to a level of one part per million in a temperate climate. It can be added

over 30 years ago to prevent in liquid or powder form. Tooth decay rates dropped Today about 50 per cent of by as much as 50 per cent the population has access to when New Zealand communifluoridated drinking water. ties began fluoridating their

that children who lived in a fluoridated area throughout their lives had 20-30 per cent less tooth decay than children who had never lived in a fluoridated area. But, unlike in the 1960s,

people living in non-fluoridated areas today receive fluoride from several sources such as toothpaste and in processed foods and beverages prepared in fluoridated areas.

James Fuller, former director of the New Zealand Defence Medical Service and a World Health Organisation consultant, describes fluoridation as "perhaps one of the greatest public health measures of all time."

increasing the fluoride levels in New Zealand's water supplies was "copying nature's way of creating dental health" and not introducing a foreign element as critics suggested.