

Oh, Those Cruel Heart Attacks!

MRS A.S. 48, wife of a senior government servant in Dhaka was getting ready to go out for a wedding and dinner along with her husband. They did not make it. She had an attack of severe pain in the left side of the chest (precordium). Before the doctor could arrive, she had succumbed to a massive heart attack — she could not be revived. Mr. A.S. had never before suffered from attacks of precordial pain (anginal), she had occasionally felt a bit breathless on exertion, ignored these episodes.

Like her husband, she had a weakness for rich food cooked in ghee (melted butter), paratas and two fried eggs for breakfast, and lots of beef and mutton korma and kalia and, of course, "biryani". She could hardly ever resist the temptation for the delicious Dhaka sweets, made of milk. And there were plenty of invitations — indeed more than one could cope with conveniently. Strangely, she had never looked obese. Of course, she had her share of financial worries and anxieties to make both ends meet within the limited income of an honest government servant. To help out, she had herself taught in college over several years — whenever her husband's postings had made this possible. She had never been aware of any real health problem. She was not known to have a raised blood pressure (hypertension)

nor was she a diabetic. Her habits were essentially of a sedentary nature with several domestic helpers, there was hardly any scope for much physical exertion in the house. And of course the practice of womenfolk going out for morning walks was unknown in Dhaka in those days.

With her sudden death Mrs A.S. had left behind a marriageable University going daughter and a bright young son, also University going, to face the world without the loving care of their mother, and a completely shattered husband — not in such good health himself.

Mrs A.S. had indeed suffered the same fate as 30 per cent of cases of heart attack (myocardial infarction following severe coronary heart disease), who do not survive the very first episode. Most of this group do not even reach the hospital. The life-long sedentary habits, continuing consumption of food, rich in saturated fats and cholesterol, and the stresses and strains, with which she had lived since her childhood, were the possible risk factors in the case of Mrs A.S.

Mr A.M., 72, a retired Government servant, had lived a full and active life. He had gone out for a short walk in the middle of a sultry morning in May 1972. He fell dead on the side-walk. A neighbour had tried to revive him without success. Near and dear ones

A Sad But not an Entirely Hopeless Situation

Prof. Habibuz Zaman

had soon taken him to the Dhaka Medical College Hospital, but he was pronounced dead upon arrival.

On a forced and modest income, Mr .M. had raised a large family and educated and married several children reasonably well. From relatively humble beginnings by dint of his sincere efforts and conscientious work, he had reached high in his official rank. In the process, he had driven himself hard to fulfil his growing ambitions both for himself and his children.

He had seen through the political upheavals of 1946 and 1947 in Calcutta, and of 1971 in Dhaka. January 1972 and found the children divided between Bangladesh, Pakistan and the United Kingdom. Since his retirement in 1956, he had occasionally suffered from precordial pain and breathlessness, especially when he had walked to the bazaar for the daily shopping,

but had felt relieved with a little rest. He had a moderate increase of blood pressure, but this had usually been controlled by medicines (anti-hypertensive drugs). When he had been intensely engaged with work for a Government Commission in 1959, he had once fainted in his office. He had recovered with medications and had led his normal life.

Over the years, the chest pains had gradually grown in intensity and increased in frequency, and attacks of precordial pains and breathlessness had rendered many nights into a veritable hell. Many sleepless nights were spent sitting up in bed and taking several nitroglycerine tablets under the tongue. Electrocardiograms had indicated a diminished blood flow through the coronary arteries (strain pattern). Medications (coronary vasodilators anti-coagulants and anti-hypertensives) and

his active habits had kept Mr A.M. going for quite a while. As a responsible family member, he had taken his medicines regularly and also visited his physician. Whenever he had felt worse than usual. But the stresses and strains and the worries and anxieties of 1971 and early 1972 had been too much for him.

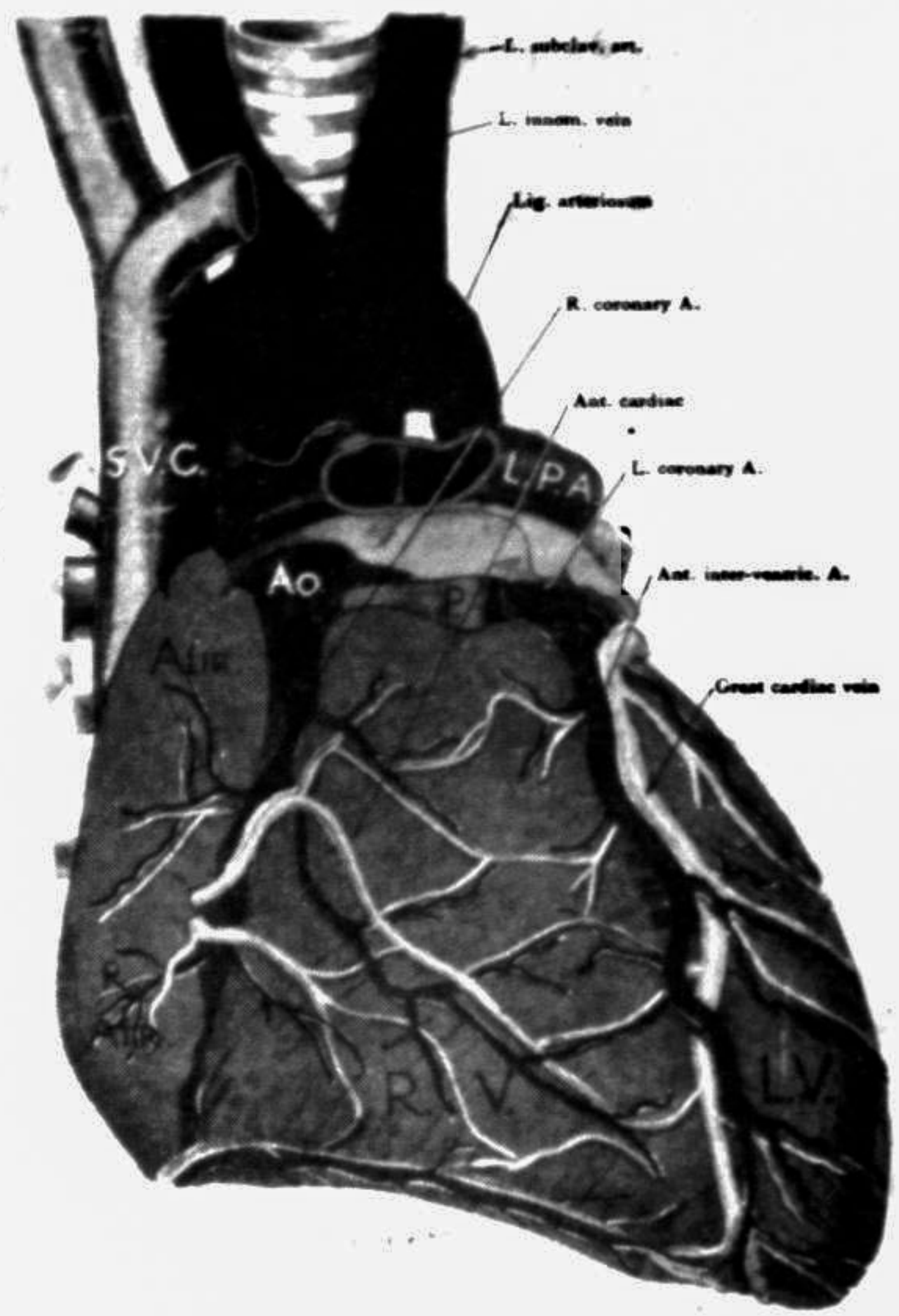
He had suffered a severe heart attack and sudden death with massive myocardial infarction, i.e. necrosis or death of a good chunk of the heart muscle wall. The coronary arteries had finally failed to provide enough blood — therefore enough oxygen — for much of the heart muscle to function. Perhaps the coronary arteries had become narrowed due to deposits of cholesterol and the formation of atheromatous plaques in their inner lining.

As a terminal event, blood clots (thrombi) may have formed within these narrowed and diseased arteries, thereby completely occluding (closing) these vascular channels.

In fact Mr. A.M. had been more fortunate than many other patients of coronary heart disease (CHD). Because of his active habits and modest life style (no smoking, diet, consisting of fish, vegetables, rice, lentils and occasionally some chicken) he had survived much longer than many patients of CHD. His active habits

had presumably improved the coronary circulation and many tiny blood channels (collaterals) had been opened up to help a bit more blood reach of the heart muscle for sometime longer.

● A graduate of the Dhaka Medical College, a Fulbright scholar (1952), WHO Fellow (1958), and Nuffield Foundation Fellow (1965), the author taught Pathology at the Jinnah Postgraduate Medical Centre at Karachi until 1970. Several of his students have distinguished themselves as consultants and professors of Pathology in Bangladesh. Dr Zaman served as the First Director of Health Services for Medical Education, Training and Research in Bangladesh from 1972. He is a Founding Fellow of the College of Physicians and Surgeons of Bangladesh and its Founder-Secretary. A former WHO Regional adviser for the Control of Non-Communicable Diseases for the South East Asia Region, The Daily Star welcomes Dr Zaman in its folds as a regular contributor on health matters.



FRONT OF HEART; GREAT VESSELS; AND CARDIAC VESSELS

Key to Abbreviation:

S.V.C.	Superior Vena Cava
Ao	Aorta
Atr	Auricle
R.ATR	Right Atrium
R.V.	Right Ventricle
L.V.	Left Ventricle
L.P.A.	Left Pulmonary Artery
P	Pulmonary Artery

LAST year 86,820 Solomon Islanders — 28 per cent of the country's population — contracted malaria. This was an increase of 33 per cent on the 1989 figure.

Hans Verhoef, an associate entomologist at the Malaria Research Center in Honiara, believes the actual number of attacks is probably much higher. Guesstimates suggest that the real number may afflict around 36 per cent of the population.

Verhoef, who is seconded from the World Health Organisation (WHO), also reports that the number of deaths from malaria is increasing, mostly in the central region of Guadalcanal where Honiara, the capital, is located, and in Malakula and Central.

What is causing the increase? Some people say it started when the Australian Government, sensitive to the growing environmental lobby, stopped supplying the pesticide DDT used for spraying mosquito-prone areas.

The permanent secretary in the Ministry of Health, Daniel Ho'ota, says the answer is not so simple: the mosquito is, he says, becoming resistant to drugs and is also changing its characteristics.

"The malaria-carrying mosquito is a very cunning insect," says Ho'ota. "It may be easy to crush with a finger, but it has a very strong character. It has changed its biting habits and has become resistant to drugs."

A study in the Seventies established that mosquitoes preferred to feast off their victims between midnight and 2am, a time when most people are sleeping. This being the case, protective measures such as impregnated bednets were a viable deterrent.

Recent trials have shown a radical change in the mosquito's feeding habits. Now their peak biting time is 6-7pm, precisely the hour when people tend to sit outside and "story" (the pidgin word for chatting) before retiring.

The mosquito, explains Verhoef, then goes off for two days to lay its eggs before resuming feeding.

This means that the once-common practice of spraying

Mosquito Changes Tactics in Solomons' Biggest War

By Nicola Baird

Despite a concerted eradication programme, malaria in the Solomon Islands is increasing. It affects reports Gemini News Service, up to one-third of the total population. As the islanders gear to battle the scourge, which is taking its toll on health and the economy alike, so too is the malarial mosquito changing its method of attack and developing new characteristics.

DDT on the interior surfaces of houses, even if it were environmentally acceptable, would have little effect since most biting is now done outside.

The wet season always sees a surge in the number of people with malaria, particularly during December and January. "If only Christmas was in July," says Daniel Ho'ota. "In December everyone sings carols outside, which makes the mosquitoes very happy — they feast and the malaria shoots up."

The changing habits of mosquitoes have been documented by researchers in Makira, a province which once had the highest incidence of malaria in the Solomons.

At dusk, dressed in shorts and T-shirts, presumably to tempt mosquitoes with an ap-

parent banquet, the researchers shine torches on their ankles.

The insects bite on average every two minutes. While going themselves they are sucked up from their blood meals with a special straw. The record tally is 2,000 malarial mosquitoes in one night, with perhaps 10 per cent of them biting between 6-7pm.

Records kept in seven clinics for workers and their families by Solomon Islands Plantations Ltd. clearly show just what a menace mosquitoes are.

In January, reports Joseph Tema, the company's senior nursing officer, 634 people developed malaria. That is 20 people a day. The number has gone as high as 700 in one month.

Though the government has come in for some criticism for not spending enough on anti-malaria measures — the current budget is around \$1.5m — the Solomons are nonetheless battling the problem on a number of fronts.

One of being watched by other malaria-afflicted countries in the region such as Vanuatu and Papua New Guinea, is the Malaria Treatment Volunteer Project at Malakula.

By the end of April, 80 of the 21,600 people living in 50 of the area's 550 villages will have been trained to recognise and treat malaria.

These volunteers will supplement the number of clinic-based nurses throughout the province who have been in the front-line in recognising and

curing malaria victims.

Volunteers are chosen by their own villages, then trained at workshops and given an anti-malarial package. This includes a shield to hang outside their house which reads: "Here lives a malaria treatment volunteer."

Currently the Ministry of Health is promoting anti-malarial consciousness by decentralising programmes to involve the entire population of 310,000 in them through their provincial administrations.

"Says Daniel Ho'ota: "Malaria is a number one problem. It affects people's health and the country's economy. Students spoil their education, the country's productivity goes down and the sickness is a threat to tourists who do not like taking preventive medicine."

The Ministry of Health is expected to devise a new anti-malarial strategy soon, based on the findings of a two-year study into the problem by Dr Nathan Kere, director of the Malaria Research Center.

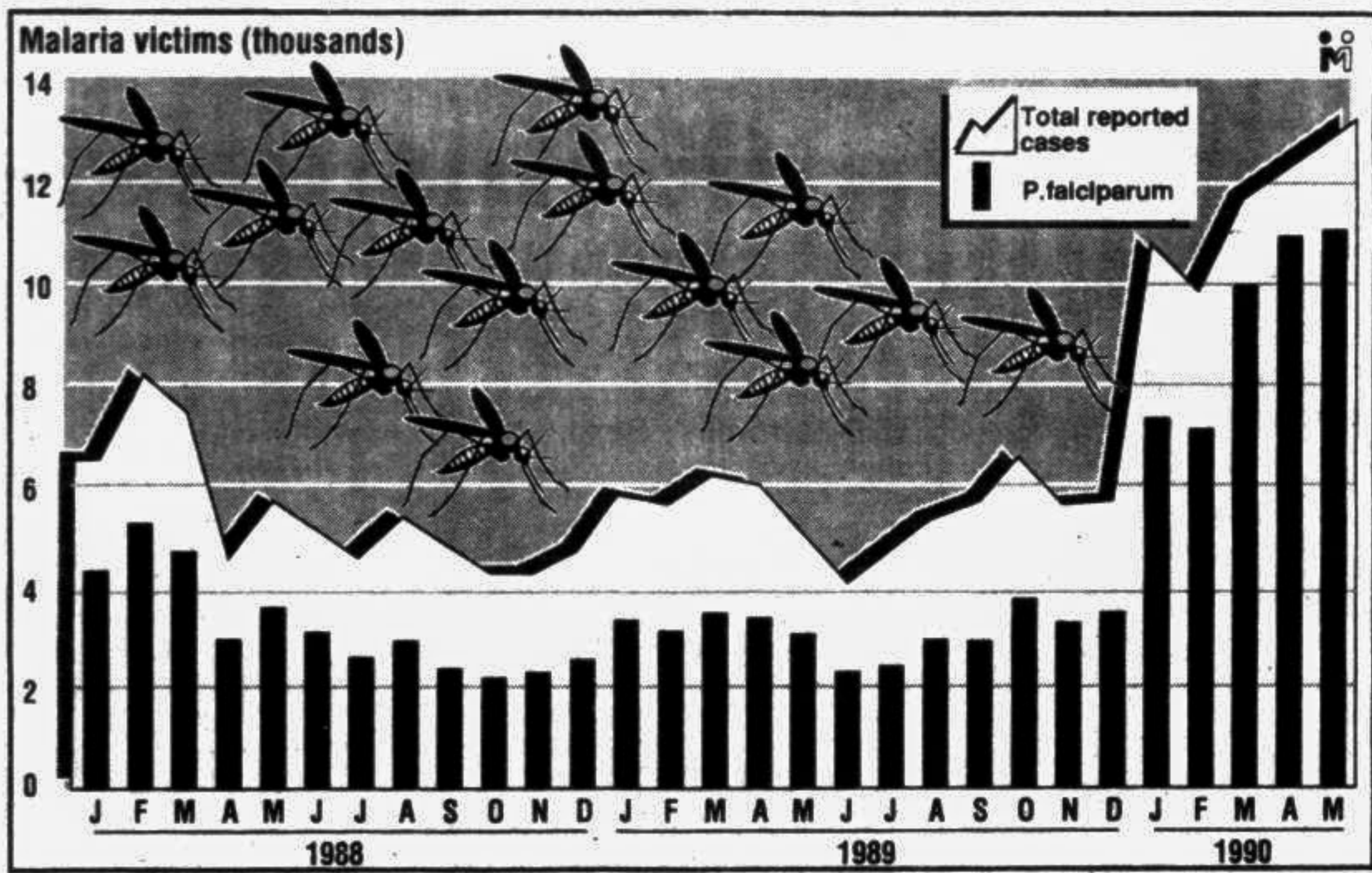
Another exercise to raise consciousness about the disease is a possible Malaria Week, an innovation announced by Nathaniel Supa, the Minister of Health. "If we all co-operated," says Daniel Ho'ota, "malaria could finish. But it will take time."

Hans Verhoef, however, is less optimistic: "Scientists say it will take at least 10 years to find a way to immunise against malaria, but even if it becomes possible it remains to be seen how it will benefit people in the rural areas, though it might be good for high-risk groups like pregnant women."

Vernoeff believes that WHO raised the hopes of too many malaria-infested countries by saying, virtually, "give us the money and we'll eradicate malaria."

"But we fell on our faces and found it impossible in many areas. The conclusion was that malaria is here to stay and we'd better tell people how to deal with it."

This is the Solomons' approach, to persuade people to take responsibility for malaria. Indications from the Malaria Treatment Volunteer Project are that it is working well. — GEMINI NEWS.



GARLIC is in its "early adolescence," developing with considerable promise but with its future still uncertain, say experts who are sensing new medicinal values of the white, onion like bulb.

At the First World Congress on the Health Significance of Garlic and Garlic Constituents, held in the United States in August last year, experts said that although modern therapeutics have superseded garlic in the treatment of many diseases, use of garlic to fend off a health problem could still be done under medical supervision.

A few cloves of cooked garlic a day cannot hurt and may help, says Dr. David Kritchevsky from the Wistar Institute, Philadelphia.

Most of the participants at the conference came from China, Japan and India where garlic and garlic preparations have been used in both cooking and traditional medicine since centuries.

Scientists attending the conference reported that in laboratory animals, garlic or one or more of its active ingredients can do an overwhelming number of good

The Glory of Garlic

by G. V. Joshi

things: suppress cholesterol synthesis by the liver; lower total serum cholesterol by reducing only the harmful cholesterol and leaving the protective cholesterol at normal levels; lower levels of triglycerides, another blood fat that has been linked to an increased risk of heart attacks; reduce the tendency of the blood to clot; and help the body dissolve existing clots. All these effects may ultimately ward off heart attacks and strokes.

Garlic promotes regression of fatty deposits in blood vessels and, perhaps, reverses arterial blockages caused by atherosclerosis; blocks the ability of chemical carcinogens to transform normal cells into cancer cells and in some cases inhibits the early growth of transformed cells; stimulates various immunological factors that may help the body combat cancer as well as stubborn fun-

gal infections; and protects cells against damage by oxidising agents and heavy metals that are widespread in modern industrial environments.

According to Dr. William J. Blot of the National Cancer Institute, USA, studies on people in China and Italy produced an unexpected finding that eating lots of garlic and onions was associated with lower rates of stomach cancer. This may be due to garlic's ability to block the formation of nitrosamines, a class of carcinogens in the digestive tract.

The garlic extract was much more effective than Vitamin C in blocking nitrosamine formation in the laboratory and in people, confirmed Dr. Jinhzou Liu, a Chinese scientist, currently at the Pennsylvania State University.

Studies at Anderson Cancer Center, Houston, USA also showed that garlic compounds can block the action of chemi-

cals that cause cancers of the breast, oesophagus, colon and rectum. The studies showed that diallyl sulfide, a constituent of garlic, is one of the most active chemopreventive agents known.

But the most exciting finding came from Dr. Arun Bordia, a cardiologist at the Tagore Medical College in Udaipur, Rajasthan, who conducted a study among 432 coronary patients who have already suffered one heart attack. Dr. Bordia divided the patients randomly into two groups, with one group receiving daily supplements of garlic juice in milk and the second not fed with the supplement.

group not taking garlic.

"The benefits of garlic became increasingly apparent with time, suggesting that garlic worked by dissolving the atherosclerotic blockages in coronary arteries," he said.

Some of the patients who took garlic juice reported an increase in vigour, improvement in exercise tolerance and a decrease in joint pains and asthmatic tendencies.

However, a few patients complained of bad smell, a feeling of heat in the body, a burning sensation when passing urine, heartburn, flatulence

and bleching. According to doctors, many of these symptoms might be eliminated by substituting a processed garlic supplement, like aged garlic extract, in place of the raw garlic juice.

The garlic researchers concluded that those who can tolerate garlic would be wise to eat it at least every second day in cooked form. Those who want to avoid the bad breath associated with it should use aged garlic extract, a deodorised supplement.

Pain Killers — A Health Risk ?

A recent 20-years study conducted in Switzerland is raising new questions about whether widely used pain killers that contain a chemical relative of phenacetin might cause some health problems.

The related chemical is named acetaminophen and it is the active ingredient in a variety of aspirin substitutes, including Tylenol, tcedrin, Anacin-3 and Vanquish, reports UPI.

Already in 1983, over-the-counter pain killers containing the ingredient phenacetin disappeared from the US market after the US Food and Drug Administration (FDA) decided it could cause kidney disease.

The new Swiss study on acetaminophen appears to underscore the wisdom of FDA's action.

So far, there is not a great deal of evidence to suggest that chronic use of products containing acetaminophen could carry the same degree of health risk as those with phenacetin.

But in a recent editorial in the "New England Journal of Medicine," Dr Paul Stolley of the University of Pennsylvania said it is "clear that much more research needs to be done if we are to understand what risks, if any, are posed by moderate or heavy acetaminophen over a period of many years."

Stolley's observations appeared in the same edition of the journal as the Swiss study, which found that women who chronically used painkillers containing phenacetin had a 16 times higher risk of dying from urological or kidney disease than a comparison group of female non-users.

The study also found that long-term use of phenacetin products was linked to higher rates of high blood pressure and increased risks of dying from cancer and heart disease.

The research, conducted between 1968 and 1987, involved 623 women who ingested as many as five 250-milligram tablets containing phenacetin daily, and 621 women who did not use the products. The study also looked at whether use of aspirin caused any apparent health problems.

Not included was an examination of the risks of prolonged use of acetaminophen products, Bernard Rosner, a biostatistician at Harvard University Medical School who was a co-author of the study, said, "If we were starting now, instead of 1968, then certainly we would include acetaminophen."

Rosner said he agreed that some research on acetaminophen is needed. One of the lessons of the Swiss research, he said, is that studies of drugs that are popular and available without a prescription

need to be done after, as well as before, they are marketed.

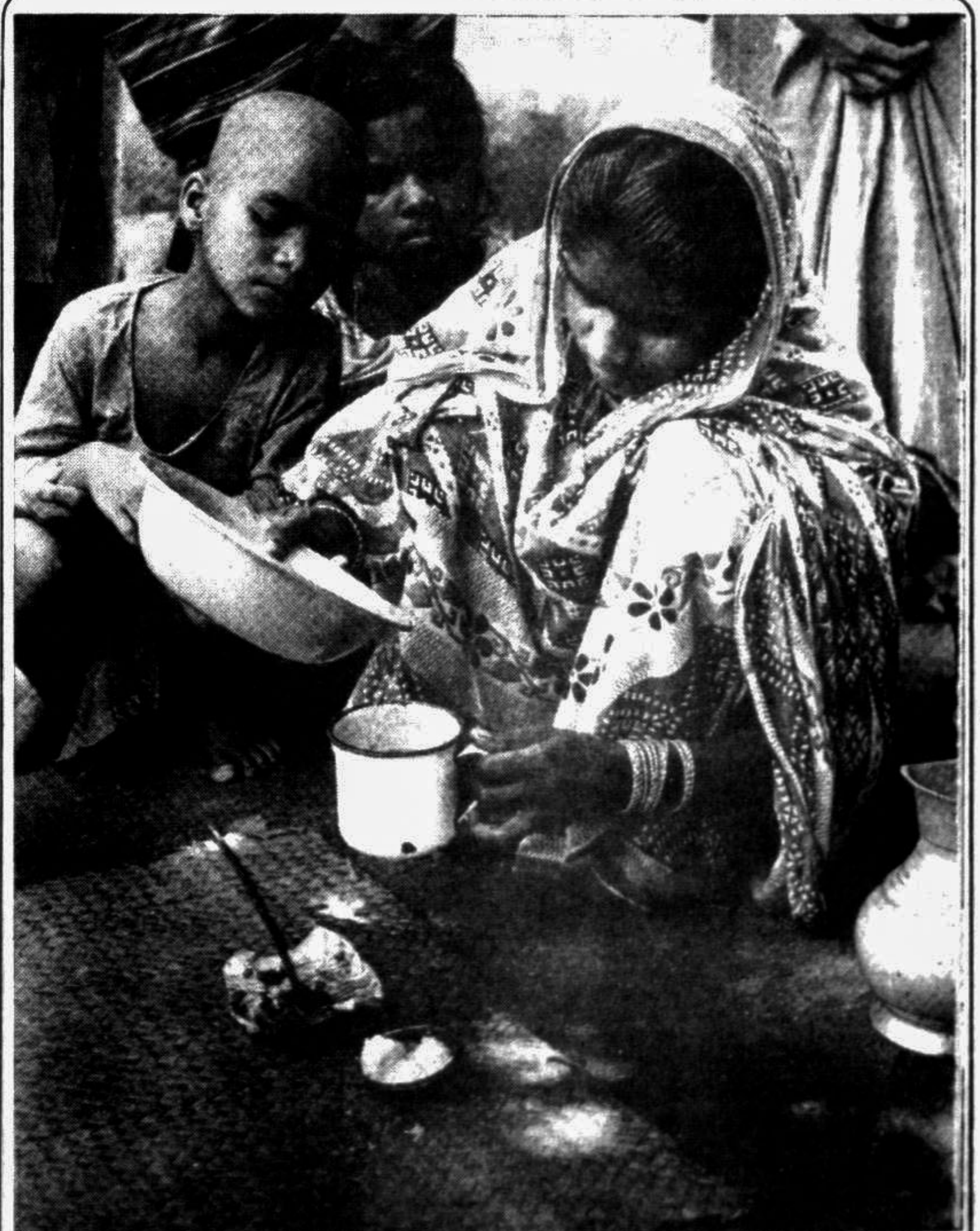
Although indications that certain painkillers could cause kidney disease first surfaced in 1953, and the evidence against phenacetin was mounting steadily by the time the FDA acted, Rosner said it is still not understood what it is about phenacetin that makes it so risky.

However, since "phenacetin and acetaminophen are chemically related—it becomes fairly urgent to learn more about acetaminophen from both experimentation in animals and epidemiological studies," Stolley said.

He said a study similar to the one in Switzerland "but focused on heavy users of acetaminophen would seem to have a high priority, if such a group of heavy users can be located and followed."

Until it was taken off the market in 1981, one of the most popular phenacetin-containing products was Empirin.

Today Empirin is being marketed with aspirin as its main ingredient. However, the Swiss study found that as far as adults are concerned, long-term use of aspirin products such as Empirin did not apparently increase risks for kidney disease, high blood pressure, heart disease or cancer—in contrast to those containing phenacetin. — PTI Feature



A young mother preparing oral rehydration saline—a compound made of water, molasses and salt—for her child suffering from diarrhoea. Photo courtesy: Health Information.