

Bil.(8)dlm.KKM-82/2/6

3 hb Oktober, 1983

Semua Pengarah Perkhidmatan Perubatan & Kesihatan Negeri.

Pengarah Perkhidmatan Perubatan Sabah/Sarawak.

Semua Pengarah Pergigian.

SURAT PEKELILING KETUA PENGARAH KESIHATAN BIL. 8/1983

Dental Fluorosis Akibat Fluoride Dalam Air Perigi

Sebagaimana yang telah dilaporkan oleh akhbar-akhbar tempatan baru-baru ini penyakit "dental fluorosis" telah dikesan dikalangan penduduk-penduduk di satu kawasan setinggan di Kepong yang telah meminum air perigi yang mengandungi kandungan fluoride yang tinggi iaitu diantara 6 - 8 ppm. Kejadian dental fluorosis telah dikesan hanya setelah Kementerian menerima maklumat dari wakil kawasan tersebut.

2. Kejadian dental fluorosis ini sepatutnya telah dapat dikesan awal-awal lagi samada di kelinik-kelinik pergigian Kerajaan yang berhampiran ataupun dikalangan kanak-kanak sekolah dari kawasan ini. Tetapi malangnya tidak seorang pun pegawai atau jururawat pergigian yang telah dapat mengesan kes dental fluorosis walaupun mereka ada mengesan kes-kes hypoplasia yang seakan-akan dental fluorosis.

3. Mulai terkeluarnya pekeliling ini tindakan yang berikut hendaklah diambil:-

- (a) Semua pegawai pergigian dan jururawat pergigian hendaklah sentiasa berwaspada tentang kes-kes dental fluorosis yang mungkin terjadi di kawasan mereka;

- (b) Memastikan bahawa kes-kes hypoplasia bukannya dental fluorosis;
- (c) Memeriksa air-air perigi untuk menentukan air-air tersebut tidak mengandungi fluoride yang berlebihan; dan
- (d) Sekiranya air-air perigi mengandungi fluoride lebih dari 1.5 ppm penduduk-penduduk hendaklah dinasihatkan jangan minum air itu dan sebaliknya usaha hendaklah diambil dengan pihak-pihak yang berkenaan untuk mendapatkan punca air minum yang lain.

Sekian.

Saya yang menurut perintah,


Datuk (Dr) Abdul Khalid bin Sahan
KETUA PENGARAH KESIHATAN

s.k: YB Menteri Kesihatan
YB Timbalan Menteri Kesihatan
YB Setiausaha Parlimen
Ketua Setiausaha
Semua Ketua Bahagian

-/re

DERAF

Semua Pengarah Perubatan dan Kesihatan
Negeri

Semua Pengarah Pergigian Negeri

Fluoride Dalam Air Telaga Dan Fluorosis

Saya adalah diarah membawa kepengetahuan tuan-tuan berkenaan dengan kejadian "dental fluorosis" akibat dari paras fluoride yang tinggi terdapat dalam air telaga dan air dari punca-punca yang lain.

Dalam suatu penyiasatan kandungan air telaga yang didapati dari satu kawasan setingan, dalam kawasan lombong yang telah di kerjakan, didapati mengandungi fluoride diantara 6.0 - 8.0 ppm. Akibat dari ini didapati juga keadaan dental fluorosis didalam gigi kanak-kanak dan juga orang dewasa yang telah tinggal dan meminum air dari telaga dalam kawasan tersebut selama tinggal di situ. Kejadian 'dental fluorosis' ini telah tidak dapat dikesan selama ini dan keadaan fluorosis ini hanya diketahui apabila Pegawai Pergigian menyiasat satu aduan terhadap keadaan gigi dikalangan penduduk-penduduk kawasan tersebut.

Kejadian 'dental fluorosis' ini sepatutnya telah dapat dikesan awal-awal lagi samada dari Klinik-klinik Pergigian Kerajaan yang berhampiran ataupun dari sekolah dimana kanak-kanak dari kawasan tersebut bersekolah. Tetapi malangnya tidak seorang pun Pegawai atau Jururawat telah dapat mengesan kes fluorosis yang datang ke Klinik sungguhpun mereka ada memeriksa kes-kes hypoplasia yang seakan-akan dental fluorosis.

Oleh dengan hal yang demikian adalah diharapkan tuan-tuan, Pegawai Pergigian dan juga Jururawat Pergigian dalam Negeri tuan, apabila mendapati kes-kes 'hypoplasia' hendaklah merasa curiga dan

menentukan ianya bukan dental fluorosis. Tuan-tuan juga dikehendaki menentukan paras fluoride dari air-air telaga yang digunakan untuk diminum, berlebihan-lebihan lagi dikawasan lombong yang telah dikerjakan. Semoga dengan berbuat demikian, kita akan dapat mengesan kejadian dental fluorosis dan kandungan fluoride yang tinggi dalam telaga air yang digunakan untuk diminum.

Sila ambil berat tentang kandungan fluoride dalam air telaga yang digunakan oleh rakyat untuk diminum dan dimana perlu memberi nasihat supaya jangan meminum air yang mengandungi fluoride lebih dari 1.5 ppm.

Sekian, terimakasih.

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Sekian.

Saya yang menurut perintah,


Datuk (Dr) Abdul Khalid bin Sahan
KETUA PENGARAH KESIHATAN

s.k: YB Menteri Kesihatan
YB Tirbalan Menteri Kesihatan
YB Setiausaha Parlimen
Ketua Setiausaha
Semua Ketua Bahagian

-/re

C O N T O H

Name

Immediate Release

Address

(If not, state time)

Telephone

Headline

(Body of release)

- 30 -

or

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Most of the houses have 8-10 feet deep culvert well with water about five feet deep. The water is murky. The nearest JKR stand pipe is about 1/4 mile away in the market compound.

Officials of the Gombak Health Office had advised the people not to use the well water for drinking. The relevant authorities had been contacted to help out the affected population with regard to their water need.

Further investigation, including taking more water samples, and to rule out possible contamination of the water is going on. The Institute for Medical Research had been asked to assist and the Department of Geological Survey contacted. The Director of Health Services of the Ministry of Health is coordinating the investigation.

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FACT SHEET

Arsenic

Arsenic is found widely in nature. Surface water in Sungai Perak and Sungai Muda, and well water in Pendang, Kedah and Selayang, Selangor had been found to contain Arsenic. The use of Sodium arsenite as a weedicide in this country had been discontinued from 1977.

Arsenical compounds are poisonous. The maximum permissible level in drinking water is 0.05 parts per million as Arsenic.

There are two types of poisoning from Arsenic.

(1) Acute poisoning

This usually follows accidental ingestion. Symptoms set in between 30 minutes and several hours after ingestion. The mouth feels dry and irritated. There is difficulty in swallowing followed by vomiting, severe abdominal pain and diarrhoea. Severe dehydration leads to exhaustion and fall in blood pressure. The kidney may be affected causing diminished urine production. Eventually the patient may collapse.

The central nervous system may also be affected. The patient develops pain in the limbs, headache, convulsions, muscular weakness and unconsciousness.

(2) Chronic poisoning

Chronic poisoning results from ingestion of low doses of Arsenic over a long period. The early symptoms are subjective and include vague malaise, abdominal complaints, itchiness, joint pains and pain in the extremities and gradual loss of strength. There may be diarrhoea or constipation. The skin becomes pigmented and the patient complains of numbness, burning and tingling sensation, muscle wasting, weakness or even paralysis of lower limbs.

Thickening of the skin known as arsenical keratosis may develop several years after the exposure. There may be loss of hair and ulceration of the skin.

Treatment

The antidote for acute and chronic arsenical poisoning is BAL,

Fluorine and Compounds

Fluorine in its compound form is found naturally in rocks. Fluoride occurs in surface water in the concentration of between 0.1 to 1.0 parts per million. In some parts of the world the level of fluoride in natural water may be as high as 20 parts per million or even higher.

Acute accidental poisoning from ingestion of soluble fluorides and the effect of industrial exposure on workers to fluorine and fluorine compounds had been reported in other parts of the world. But it is the presence of fluoride in drinking water and its relationship to dental health that a lot had been written about.

Mottling of the teeth (dental fluorosis) was the first recognised result of chronic fluoride ingestion. This condition, reported from many parts of the world, is usually due to the presence of excessive fluoride in drinking water. When the amount of fluoride in water exceeds one part per million some degree of mottling of the enamel of the teeth usually occurs among the children drinking it. Areas of enamel slowly lose their shiny appearance and become dead white. These white areas become irregularly pigmented to a chocolate colour, so that white opaque areas of various degrees of pigmentation give the teeth a marked mottled appearance.

Far more severe conditions than fluorotic teeth may occur in persons who ingest relatively higher concentration of fluoride, such as those working with cryolite used in the production of aluminium. They develop calcification of ligaments and increased density of bone leading to stiffness and limitation of movement accompanied by aches and pains. In extreme cases the patient may become bed-ridden.

Serious fluorosis does not occur much before the age of thirty, nor with less than 15 years' consumption of fluorotic water and then slow calcification starts.

Fluoridation of Water Supply in Prevention of Dental Caries

It has been shown in many parts of the world that the amount of dental caries in the population varies inversely with the amount of fluoride in drinking water: i.e. the higher the level in water the less caries there is in the community. Fluoridation, the addition of fluoride to bring the concentration up to 1 part per million, usually regarded as the optimal level, has therefore been widely recommended.

Fluoridation of community water supplies to an optimum level to reduce the prevalence of dental caries was started first in the United States and then Canada some 40 years ago. Assessment of these programmes on the effect of fluoride on a whole generation of children after 5, 10 and 15 years have consistently shown that caries prevalence to be 60 per cent less than among children living in areas where the water was deficient in fluoride (Forrest 1967). Fifty to sixty per cent reduction in the prevalence of dental caries was reported in the report the Fluoridation Projects in the State of Johore (1964-1967). Similar reduction of the prevalence of dental caries was also reported in Singapore where the water has been fluoridated.

PRESS RELEASE TO BERNAMA 20.9.83

Datuk (Dr) Abdul Khalid bin Sahan
Acting Director General of Health
Ministry of Health
Jalan Cenderasari,
KUALA LUMPUR.

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Immediate Release

Fluoride and Arsenic in Well Water

Samples of water taken from wells in a squatter area at Kampong Kepong Ulu, Batu 7½ Kepong, Kuala Lumpur had been found to contain excessive amount of fluoride and arsenic. Eleven out of seventeen samples tested for fluoride had fluoride content higher than the maximum permissible level of 0.7 to 0.9 parts per million. Three out of thirteen samples tested for arsenic had arsenic content higher than the maximum permissible level of 0.05 parts per million. Initial investigation did not find any artificial source of contamination with chemicals concerned.

Preliminary investigation into the effect of these high fluoride and arsenic content in drinking water in the affected area had discovered three children and one adult female with mottling of the teeth, a condition called dental fluorosis. So far there is no evidence of acute or chronic poisoning from arsenic.

The area affected, ex-mining area, is partly in Gombak District and partly in Wilayah Persekutuan. The area in Gombak District has about 200 houses with about 1000 population. The number of houses and people in the affected area of Wilayah Persekutuan is less. These people had been staying in the affected area for the past twenty years.