

ABSTRACTS

“A demographic study of female sterilization in Thailand”.

MANASAVI UNHANAND (1967). *J. Dept. Med. Serv.*, 16 : 403.

The author analysed 10,268 female sterilization cases reported to the Ministry of Public Health from October 1962 to March 1964 in Thailand.

Chinese persons accounted for 10.6 per cent of the sterilized women while the proportion of the Chinese in the population of Thailand was estimated to be 10.0 per cent.

73.0 per cent of the women who came for sterilization were in the 25-34 age group. The population of the Chinese women over 30 years of age was 70%, significantly different as compared to 53.0% of the Thai.

About half of the total women had an average of 4.5 children (4.9 for the Thai and 5.3 for the Chinese). The duration of marriage was 8.7 years and 10.2 years for the Thai and the Chinese respectively.

29.6 per cent of the husbands of Thai women belonged to the professional, official and administrator groups, nearly all of them being government officials. Husbands from agricultural section accounted for only 15.0%. Nearly half of the husbands of Chinese women were clerks, salesman and kindred workers.

The majority of the women who came for sterilization were from the low socio-economic group. Only 13.7% of the Thai and 15.8% of the Chinese families had incomes of more than 1,300 Baht (US\$ 65.0) per month. While 60.0% of the Thai women resorted to sterilization because of poverty and inability to support their children adequately, only 37.0% of the Chinese women were motivated by economic reasons. On the other hand 60.0% of the Chinese women had sterilization carried out because they have had the desired number of children although economically they probably could afford to have more children.

TAN CHONGSUPHAJASIDDHI.

“Antimicrobial Therapy in Infectious Diarrhoea in Children”.

UDOM LEKSOMBOON (1969). *J. Dept. Med. Serv.*, 18 : 167. (Original in Thai)

The study was carried out among 1741 diarrheic children in the Children's Hospital, Bangkok. 588 cases were out-patients and 1,153 were in-patients. Bacterial cultures from stools were positive among 30.9% out-patients and 39.2% in-patients. It was found that 20% of the bacteria isolated were *Shigellae*, 4.8% *Salmonellae* and 4.9% enteropathogenic *Escherichia coli*.

Among dysenteric cases, 53.8% (out-patients) and 48.7% (in-patients) were due to *Shigellae*.

Sensitivity of these bacteria to Colymycin, Ampicillin, Furazolidone, Nalidixic acid, Neomycin, Terramycin and Chloramphenicol was studied. It was found that *Salmonellae* were 100% sensitive to Colymycin, 73.6% to Ampicillin, 75% to Furazolidone and about 60% to the others. *Shigellae* were sensitive to all drugs except Terramycin and Chloramphenicol (11.9% and 9.4% respectively).

Enteropathogenic *E. coli* was found to be 93% sensitive to Colymycin, 91% to Furazolidone and relatively resistant to the others.

TAN CHONGSUPHAJASIDDHI.

“Juvenile Shigellosis in Ubol Hospital”.

BOONSRI POOVICHIT, PINYO SUSILAVORN and UDOM LEKSOMBOON (1966). *J. Dept. Med. Serv.*, 15 : 567.

The authors analysed 295 cases of infants and children suffering from shigellosis admitted to Ubol Hospital in Thailand during an outbreak of the disease in Ubol Province during 1965-1966. Bacteriological study of rectal swabs revealed that *Shigellae dysenteriae* was responsible for 88.47% of the cases, *S. flexnei* for 8.14% and *S. sonnei* for only 1.36% of the cases. The disease was found to be predominant among children between the ages of one and two years. The incidence was relatively low among children over 5 years of age.

All cases presented with fever, stools containing mucus and blood and also most of the cases had tenesmus. Convulsion was noted among 5.7% of the cases. Half of the patients had isotonic dehydration while the other half, hypotonic. Vomiting occurred in 22.9% of the cases.

The effectiveness of the antibiotics and chemotherapeutic agents was studied both in vitro and in vivo. The *Shigellae* were found to be highly resistant to sulfadiazine and obscured poor responses to chloramphenicol, terramycin and streptomycin. Satisfactory clinical improvement and a reversal from positive to negative stool cultures were found in cases treated with kanamycin and neomycin. Ampicillin, either by oral route or by intramuscular injection, gave the most striking clinical and bacteriological responses, stool cultures becoming negative within 3 days of treatment.

TAN CHONGSUPHAJASIDDHI.

“Anaemia in parturient woman, with special reference to malaria infection of the placenta”.

JILLY, P. (1969). *Ann. Trop. Med. Parasit.*, 63 : 109.

The purpose of this study was to determine the importance of placental infection as direct or indirect cause of maternal anaemia, and also whether the sickle-cell trait shows any significant advantage in the incidence of malaria.

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Eighty parturient women admitted to the labour ward of Korle Bu Hospital, Accra, were examined in this study. Thick and thin films were prepared from capillary and also from available placental blood. Parasite count, red cell count, packed cell volume and sickling tests were performed. Red cell morphology and malaria pigment were also noted.

Only 35 out of 80 parturient women who had fever on delivery or a few days earlier, showed *Plasmodium falciparum* trophozoites in their blood. All but one of the 22 placental blood examined from patients with parasitaemia revealed either *P. falciparum* schizonts or malaria-pigment deposits. Of 25 placental blood examined from patients with negative malaria in peripheral blood, only one showed parasites and 12 showed malaria-pigment deposits.

The haemotocrit levels in patients with parasitaemia were lower than those in non-parasitized group. The severity of anaemia was closely correlated to the extent of phagocytic activity found in the placenta, but showed no correlation with the parasite density in the peripheral blood.

No evidence was found to support the view that haemoglobin S may be a less favourable medium than haemoglobin A for the development of *P. falciparum* parasites.

SRICHAROEN MIGASENA.

"An evaluation of rest and low fat diet in the management of acute infectious hepatitis".

SILVERBERG M., WHERRETT B., WARDEN E. and NEUMANN P.Z. (1969). *J. Pediatrics*, 74 : 260.

Bed rest and low fat diet are regarded as valuable in the management of patients affected with infectious hepatitis. But the authors of this paper have questioned this concept by presenting their studies of infectious hepatitis in children.

The first part of the study consisted of 86 patients among whom 44 cases were given a low fat diet (1 gm. per kg. body weight) and 42 cases were given a normal fat diet (aver; 2.3 gm. per kg. body weight). All the patients were hospitalized for about one month and with follow up at 4 and 12 months. The results showed that there was no difference between the two groups, with regard to the rate of fall of serum transaminase levels. The only difference between the two groups was that anorexia was commonly found in patients receiving the low fat diet.

The second part of the study consisted of 27 patients, of which 12 patients were advised to rest in bed and 15 patients were allowed to perform free activity, with no fat restriction in the diets of both the groups. The results showed no difference between the two groups.

The authors believe that children affected with infectious hepatitis should be allowed both diet and activity of their own choice.

SIRIVAN TEJAVANIJA.

"A study on malaria vectors in the central plain of Thailand".

SURIN PINICHPONGSE and MANOP RATANARITIKUL (1968). *J. Med. Ass. Thailand*, 1 : 61. (Original in Thai).

In the central plain of Thailand in an area comprising the suburbs of Bangkok, there is a low rate of malaria transmission, mostly *Plasmodium vivax*. The incriminated malaria vectors of Thailand, namely, *Anopheles minimus*, *A. balabacensis* and *A. sondaicus* have never been found during entomological study of the area. Only three suspected vectors were found, viz, *A. aconitus*, *A. philippinensis* and *A. campestris*. In 1967, Gould *et al.* (*Trans. Roy. Soc. Trop. Med. Hyg.* 61 : 144) found sporozoites in one *A. aconitus* caught in this area and believe that *A. aconitus* is the vector of malaria in the central plain of Thailand.

The authors carried out a study on malaria vectors in this area from December 1966 to November 1967. They found that among the three suspected malaria vectors, *A. aconitus* had the highest man biting density and parous rate and its monthly density fluctuated in a similar pattern to the malaria incidence in the area.

A study on the biting and resting habits revealed that *A. aconitus* is mainly endophilic. This species was found to be susceptible to D.D.T. and rests habitually on walls and other surfaces in houses usually not higher than three meters. So the authors believe that the control of this malaria vector by D.D.T. house spraying would be successful.

TAN CHONGSUPHAJASIDDHI.

"Two Cases of Eosinophilic Myeloencephalitis with Evidence of Gnathostomiasis".

THANONGSAK BUNNAG, PIPAT JUTTIJUDATA and SOMPONE PUNYAGUPTA (1968). *J. Med. Ass. Thailand*, 51 : 813. (Original in Thai)

The authors had previously reported that *Gnathostoma spinigerum* is the causative agent of a new disease in Thailand called eosinophilic myeloencephalitis to be differentiated from typical eosinophilic meningitis caused by *Angiostrongylus cantonensis*. In this paper, the authors report two cases from a series of 102 cases of eosinophilic myeloencephalitis seen at the Ubol Ratchathani Provincial Hospital in Thailand between April 1966 and March 1968. The two cases came to the hospital with a history of headache followed by signs and symptoms of meningitis and myelitis. There was definite increase in eosinophiles in the cerebrospinal fluid. Each of the patients had an immature male *Gnathostoma* surgically removed from their swollen eyelids. The patients recovered completely from the neurological condition without any specific treatment.

TAN CHONGSUPHAJASIDDHI.

"Retreatment of drug-resistant pulmonary tuberculosis"

SONGKRAN SUPCHAREON, NINART CHINACHOTI, SMAN TRAKULTIM, M.R. KALYANAKIT KITTIYAKARA and NUMANONG TIRABARDYA (1968). *J. Med. Ass. Thailand*, 51: 91. (Original in Thai)

The resistance of tubercle bacilli to streptomycin, PAS and Isoniazid (firstline drugs) had previously been reported. The second-line antituberculosis drugs including pyrazinamide, cycloserine, ethionamide and kanamycin had been introduced.

In this report, 175 patients with moderate or advanced tuberculosis resistant to the first-line antituberculosis drugs were studied. They were treated with either a selective combination of three second-line antituberculosis drugs or a combination of both second-line plus first-line drugs. The drugs combination was chosen according to the history of drug sensitivity and individual's drug tolerance of the previous medication. The results of the treatment were evaluated by radiological, clinical and bacteriological follow-up.

Of 175 patients, 131 received only medical treatment and 86 of them (65.65%) had sputum conversion. The other 44 patients had surgical intervention in addition to the medication, 24 cases of thoracoplasty and 20 lung resection.

Eighty-three per cent of the thoracoplastic patients and all of the lung-resected cases had sputum conversion. The overall sputum conversion rate was found to be 72%.

By radiological follow-up, improvement were seen in 130 cases (77.7%), no change in 24 cases (13.7%) and spread of the disease in 15 cases (8.6%).

With regard to side effects due to the drugs, treatment was discontinued due to joint pain in 3 patients receiving pyrazinamide, psychosis in 3 cases treated with Cycloserine and gastrointestinal disturbances in 8 cases receiving Ethionamide, while treatment with Kanamycin was continued to the full course.

TAN CHONGSUPHAJASIDDHI.

"Nutritional Status and Intellectual Performance in a Rural Philippine Community"

GUTHRIE, H.A., GUTHRIE, G.M. and TAYAG, A. (1969). *Phil. J. Nutr.*, 22, (1) 2.

A non verbal intelligence test standardized for use in the Philippines was administered to 413 children from a homogenous socio-economic background in an elementary school in a rural Philippine barrio. Measurements of height and head circumferences were made using standard anthropometric procedures. Correlations between head circumference and height and intelligence scores indicated that shorter children did less well than taller children of the same age. A significant relationship between head circumference and intelligence was demonstrated at only two ages. A comparison of heights of experimental children

with children from urban public and private schools showed that rural children had experienced a growth retardation.

V.O. TANTENGO.

"Heights and Weights of School Children in Relation to Socio-economic Status"

CAMCAN, G.A. (1969). *Phil. J. Nutr.*, 22, (1) 11.

A study of height and weights of 8,024 school children classified into three groups according to socio-economic status showed that children with parents who are better circumstanced were taller and heavier than those children whose parents belong to the lower classes, although differences between classes in the mean heights and weights were not consistently statistically significant for each age group to prove the advantage of one class over the other. With each increase in age body measurements of boys and girls correspondingly increased more or less regularly. At age seven, boys were slightly but significantly taller and heavier than girls, but at age 9-13 girls grew at a faster rate and at 14, girls were still heavier, but the boys were able to catch up in stature.

V.O. TANTENGO.

"Excretion of Some Water Soluble Vitamins among Pediatric Cases in the Philippine General Hospital"

SALVOSA, C.B. and TANTENGO, V.O. (1969). *Acta Med. Phil.*, 8, (2) 41.

Urinary excretion values of thiamine, riboflavin, n-methyl nicotinamide, cyanocobalamin and pantothenic acid among pediatric cases admitted for various illnesses did not demonstrate significant differences from control and institutionalized levels. It was noted that specific cases with suggestive signs of deficiencies excreted very low values of these vitamins. A number of children admitted for specific clinical entities were cases of deficiency diseases.

V.O. TANTENGO.

"Further observations on *Angiostrongylus cantonensis* in the Philippines"

WESTERLUND, N. C. and CHAMBERLAIN, M. (1969). *Acta Med. Phil.*, 6, (1) 3.

Studies on *Angiostrongylus cantonensis* in the Philippines started in 1965 as surveys of rats for the presence of the adult parasite and isolation of rat lungworm larvae from the giant African snail. The authors examined 215 rats and 10 were found harboring the parasite. The species of rats found positive were *Rattus mindanensis*, *R. everetti*, *R. luticentris* and *R. norvegicus*.

A total of 279 snails under 9 genera were examined and 82 harbored *A. cantonensis* larvae falling under 5 genera as follows: *Hemiplecta sagittifera*, *Achatina fulica*, *Helicostyla macrostoma*, *Chlorea fibula* and *Cyclophorus sp.*

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Snails heavily infected were fed to weanling rats and adult *A. cantonensis* were found in rats fed with *Hemiplecta sagittifera*, *Achatina fulica* and *Helicostyla macrostoma*. Larvae from 18 *Achatina fulica* were fed to 18 rats and adult *A. cantonensis* were found in 15 rats.

B.D. CABRERA.

"Angiostrongylus cantonensis in Rodent and Molluscan Hosts in Manila and Suburbs".

SALAZAR, N.P. and CABRERA, B.D. (1969). *Acta Med. Phil.*, 6, (1) 20.

In addition to the snail as intermediate hosts of *A. cantonensis*, the authors reported that the brown slug and the black slug are also good molluscan intermediate hosts. In the brown slug, *Imeriorea plebeia* the infection rate was 5.63 per cent while in the black slug, *Leanicantlis alte* it was 18.18 per cent.

The incidence of *Angiostrongylus* infection in rats is relatively low, 1.07 per cent despite the presence of suitable vectors.

In general, cerebral angiostrongylosis or eosinophilic meningo-encephalitis is not a serious public health problem in the Philippines. The potential source of human infection may be the eating of raw or improperly cooked fresh-water snails, none of which however was found to be naturally infected with *A. cantonensis* in this survey.

B.D. CABRERA.

"Laboratory Observations on two Lorelaptid mites, *L. nutalli* Hirst and *L. echidonirus* Berlese".

GONZALES, A.M. and SALAZAR, N.P. (1969). *Acta Med. Phil.*, 6, (1) 18.

Various workers during the last 15 years have investigated the vector potentialities of laelaptid mites. During a survey of ectoparasites in rats in Manila and suburbs the authors were able to make biological characteristics of these mites as follows. *L. nutalli* has a developmental period of 22-29 days at 28°C and 90 per cent humidity; when well-fed it can live for 75 days, and if starved only 13 days. *L. echidonirus* survived only for 23-28 days. The two species of mites seemed to prefer sheep's blood.

B.D. CABRERA.

"Serratiosis in a nursery".

ARAGON, P.R., CANLAS, B.D. and MANUSON, N. (1969). *Acta Med., Phil.*, 6, (2) 58.

The authors reported 5 fatal cases of systemic *serratia marcescans* infection occurring among newborn. The cases which were clinically suppurative meningitis, septico pyeoma and septiceoma were verified at autopsy and in the laboratory. The isolates were susceptible to chloromycetin and neomycin.

The manner by which the organism was able to bring about systematic infection was discussed by the authors as being through the skin in the form of abscess or through the gastro-intestinal tract as an enterocolitis.

B.D. CABRERA.

"Ascariasis: Beliefs and practices of a rural Malay community".

CHEN, P.C.Y. (1970). *Med. J. Malaya*, 24: 176. (with 3 tables and 3 figures)

The author carried out studies in a rural Malay community in a remote area of West Malaysia with special reference to their beliefs and practices in relation to the prevalence of Ascariasis in the community. Data on beliefs and practices were collected from numbers of the community by interviews, as well as by direct observations on the sources of material such as drugs etc., available in the households.

The most common belief among the community studied was that Ascariasis is caused by children eating a side dish "lauk", containing fish, milk of mature coconuts, peanuts and eggs. The author points out that in spite of the widespread unscientific beliefs regarding causation and their consequently futile attempts at prevention, 96.2% of the households used Piperazine or Santonin preparations for treatment. About 38% of the population combined drug treatment with traditional treatment-such as the use of village herbs and talismans. The use of talismans and in particular food taboos against children constituted the main attempts at prevention. Members of the community disposed of human excreta indiscriminately behind bushes and close to their dwellings. General hygienic habits such as washing hands especially by children before the handling of food etc., was not practised in particular. The author points out that any health education programme aimed at preventive measures should take into full account the relevant indigenous traditional beliefs and concepts practised in the community before attempting to bring about changes.

C.P. RAMACHANDRAN.

"Selection of *Culex pipiens fatigans* for vector ability to the rural strain of *Wuchereria bancrofti* - a preliminary report".

THOMAS, V. and RAMACHANDRAN, C.P. (1970). *Med. J. Malaya*, 24 : 196. (with 2 tables)

The authors carried out studies in the laboratory on the possibility of selecting out Malayan strains of *Culex pipiens fatigans* susceptible to the rural Malayan strain of *W. bancrofti*. The purpose of the study was to find out if there was possibilities of *C. fatigans* in West Malaysia in nature developing susceptibility to *W. bancrofti* as a result of changes in the gene frequency of the field population due to some natural or artificial selection pressure.

Results of feeding five different colonies of *C. fatigans* on a donor harbouring the rural strain of

W. bancrofti showed that their initial infectivity rates varied from 6.6 to 28.1 per cent. By selective breeding of susceptibles it was possible to increase the infection rates in two colonies to about 65 per cent by the 4th or 5th generation. It is concluded that there is a low gene frequency in Malaysian *Culex fatigans* for susceptibility to *W. bancrofti* infections and the possibility of this mosquito establishing itself as a vector is remote though it still exists.

C.P. RAMACHANDRAN.

"Evaluation of a broad spectrum anthelmintic Tetramisole on threadworms".

CHIN, G.G. (1970). *Med. J. Malaya*, 24 : 218.

One hundred children between the ages of one and twelve parasitologically diagnosed by the Scotch tape (cellophane) method of having infections with *Enterobius vermicularis* (known as threadworms or pinworms) were treated by the author with Tetramisole (Tetrahydrophenylimidazolizol) a soluble white crystalline substance which hydrolyses down to its major metabolite 2 - 0 × 0 - 3 (2-mercaptoethyl) - 5 - phenylimidazolidine which is insoluble in water and rapidly excreted.

Results of the study showed that single doses between 40 - 80 mg., produced good worm clearance with little or no side effects in cases with light or moderate infections. In heavier cases of infection a second dose one week later tended to eliminate all the parasites. The author concludes that since "Tetramisole is also effective against most Nematodes, the drug could be used as a single dose, broad spectrum anthelmintic of low cost and easy tolerability in practical use or for mass treatment for most nematodes".

C.P. RAMACHANDRAN.

"Malaria in Rural Malaya".

SANDOSHAM, A.A. (1970). *Med. J. Malaya*, 24 : 221. (with 1 figure)

Although malaria has been known to be prevalent in many parts of rural Malaya for many years it has not received the attention given to it in urban and agricultural holdings. No anti-malaria work has been done in many of the rural villages and malaria is prevalent in holo and hyperendemic forms although clinical manifestations of the disease may not be so evident among the people who have developed immunity at the cost of high child morbidity and mortality.

The author points out that these children must be saved from the effects of malaria. Another reason why rural malaria should be controlled is the constant danger of the infection being introduced to the urban and agricultural communities which are presently better protected. Undoubtedly this would also involve the saving of considerable amount of money for the City Councils in being able to cut down costs on anti-malaria activities.

Ideally the author points out the disease should be eradicated from the country. The big question is whether eradication is technically and administratively possible within a reasonable period of time. If achieving eradication is not time-limited, then is it economically justifiable? Would it not be more expedient to try and bring down the infection to a low level and maintain it at that level?

However, a malaria eradication programme has been started in West Malaysia but it may meet difficulties with exophagic vectors, drug-resistant strains of malaria parasites, troop movements and migration of people to land settlement areas and the inability of the malariologist to shoulder health responsibilities as well. He disapproves the exhibition of Primaquine in a community, especially the aborigines, with a high level of G6PD deficiency because of the danger of haemolysis.

C.P. RAMACHANDRAN.

"A case of ocular sparganosis in Hong Kong".

WONG, W. and HUANG, C.J. (1970). *Far East. Med. J.*, 6 : 107. (with 3 photographs)

The authors record the first case of Ocular sparganosis from Hong Kong. The patient was a Chinese male aged 32 who had come from mainland China.

In 1963 he had repeated attacks of swellings of the right eyelids which were neither painful nor itchy. The swellings subsided after he had taken some herb medicine. The attacks became more frequent at monthly and then at weekly intervals and in April of 1963 he observed a small nodular mass in the right eye, which gave him slight irritation but without interference of his eyesight. He had been examined by private practitioners on many occasions and he came to see the senior author with the diagnosis of a benign cyst. A cystic swelling about the size of a peanut was noted sub-conjunctivally undercovered by the right upper eyelid. There was no conjunctival injection surrounding it. The cyst was whitish in colour, soft in consistency and freely movable. Physical examination revealed no abnormality and no sub-cutaneous nodules in other parts of the patient's body.

The patient's history revealed that at the age of seventeen he had applied frog-meat to the right temporal region because of headache. He had also used herbs as poultice. He had also eaten raw fish and occasionally steamed or fried frog meat. Blood examination showed haemoglobin 15.9 g., white cell count 6,900 per c.mm.; ESR was 7 m.m. in one hour (Wintrobe); stool examination showed presence of *Clonorchis* eggs.

On incision of the cyst a white ribbon-like mass was visible which proved to be a worm which wriggled its way out. The worm measured 8.0 cm. in length and 1.5 - 2.0 m.m. in breadth and was identified as a Sparganum. Skin test performed on the patient after the removal of the worm from antigens prepared from Spargana dissected from frogs purchased in the local market showed a delayed type of reaction.

C.P. RAMACHANDRAN.

ABSTRACTS

"*Opisthorchis viverrini* (Poirier, 1886) a trematode parasite of man in West Malaysia"

BISSERU, B and LIM, K.C. (1969). *Trop. Geogr. Med.*, 21 : 138. (with 10 photographs)

The author reports for the first time in West Malaysia locally acquired human infections with *Opisthorchis viverrini*. Routine examination of stool specimens of medical students in the University of Malaya, Kuala Lumpur, using a formol-ether concentration technique revealed the eggs of the sub-family *Opisthorchinae* in some of the specimens obtained from Malaysians of Chinese origin. *Melanoides tuberculata* collected from disused tin mining pools near Kuala Lumpur were frequently found infected with the intermediate stages of *O. viverrini* and shedding cercariae. The complete life cycle of *O. viverrini* was worked out from naturally infected and labora-

tory bred snails together with morphological study of the egg with miracidium, sporocyst, redia, cercaria, metacercaria and adult stages of the parasite. The snail *Melanoides tuberculata* commonly encountered in ponds, slow moving streams and disused mining pools in West Malaysia was established as the first intermediate host of *O. viverrini* and a locally bred fish, the grass carp *Ctenopharyngodon idellus* was established as the second intermediate host for the parasite. The author points out that the grass carp *Ctenopharyngodon idellus* commonly found in pools in the country is eaten particularly by the Chinese as raw fish dishes both at home and in restaurants especially during festival times. All the eleven cases reported in this paper whose stools contained eggs of *O. viverrini* were asymptomatic with low egg counts.

C.P. RAMACHANDRAN.