Canada Diseases Weekly Report

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Rapport hebdomadaire des maladies au Canada

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MELIOIDOSIS IN A TRAVELLER - QUEBEC

In July 1988, a 40-year-old male resident of Quebec who had worked as a cooperant in Bangkok, Thailand for 6 months returned to Canada. Three weeks prior to his return home, he began to experience fever and chills, and had a cough producing a coloured sputum. Following a cursory examination, a Thai physician had diagnosed probable malaria, even though the smear was negative, and prescribed therapeutic doses of Aralen®.

Immediately upon returning to Canada, the patient sought medical advice at a hospital. There was nothing unusual in his medical history and he had never had any tropical diseases. His work requires him to travel abroad regularly, and for the past 6 months he had been mainly in Bangkok, although he had spent some time in the outlying areas, particularly the north, and sometimes in the bush. He had also visited Hong Kong briefly.

Upon questioning, the patient said that he felt generally unwell; the fever persisted, but he was no longer experiencing chills. He had lost 5 kg. His cough was slightly productive but there was no significant dyspnea. On examination, his temperature was 38.7°C; all other vital signs were normal. Pulmonary auscultation revealed discrete abnormalities in the right upper chest; the rest of the physical examination was normal. There was a slight leukocytosis (11.2 X 10³/L, with a normal differential). Sedimentation rate was elevated at 107 mm/h. Pulmonary X-ray showed a right upper lobe cavity surrounded by an alveolar infiltrate. Tomography sections confirmed the presence of a cavity 4 cm in diameter.

The patient was admitted to hospital with a diagnosis of pulmonary abscess, probably tuberculous. Bronchosopic samples yielded no Mycobacterium tuberculosis; however, there were many gram-negative rods which had a bipolar appearance when stained.

On the first day of hospitalization, cefoxitin was administered. The following day this was replaced by clindamycin and tobramycin. Because the fever still persisted on the third day, it was decided to add ceftazidime, 2 g IV every 6 h, to the antibiotic regimen. On the fifth day of hospitalization, the laboratory confirmed the presence of Pseudomonas pseudomallei in the sputum. The clindamycin and therapeutic doses of Aralen® were continued.

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Le patient était admis à l'hôpital avec un diagnostic de pneumonie abscessue, probable tuberculeuse. Les prélèvements de broncoscopie ne révèlent pas la présence de Mycobacterium tuberculosis, mais mettent en évidence de nombreux bactéries gram-négatives ayant un aspect bipolaire à la coloration.

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tobramycin were replaced by trimethoprim/sulfamethoxazole (TMP/SMX) (TMP 250 mg or 4 mg/kg IV every 6h). By the next day, the patient’s temperature had dropped and the cough had decreased. After 10 days of treatment, the patient was totally asymptomatic and a follow-up X-ray showed virtually complete resolution of the lesion on the right upper lobe. The patient received IV treatment for 1 month. It was decided to consolidate this treatment with 2 months of oral antibiotic therapy with TMP/SMX (160 mg TMP every 12 h.). At the September 1988 follow-up visit the patient was still well.

Discussion: Samples were taken for serology at the beginning of hospitalization and sent to LCDC in Ottawa, and to CDC, Atlanta. They were found positive for P. pseudomallei, with a titre of 1:2048 by microhemagglutination.

There have been 3 cases of melioidosis reported in the Canadian literature (1,2,3), all involving refugees from Southeast Asia. In this area, subclinical infection is common and serologic studies have shown significant antibody titres in up to 20 % of asymptomatic individuals. The organism can remain latent for months to many years. Concomitant diseases such as diabetes, burns and alcoholism have frequently been associated with its reactivation. Consequently, melioidosis may occur or recur years after an individual has left the endemic area.

The case presented here appears to be the first person of Canadian origin in whom melioidosis, apparently acute, has been described. The Quebec Public Health Laboratory reports that this is the first time such a case has occurred in this province.

The majority of cases of melioidosis occur in Southeast Asia or in persons who have stayed in that area. Sporadic cases have also been reported in India, Korea, the Philippines, Australia, Panama, Ecuador, and Turkey.

P. pseudomallei is a waterborne bacterium transmitted to man directly from the environment. The asymptomatic form of the infection occurs most frequently, followed by lung involvement which may be acute or chronic. It characteristically involves the upper lobes, sometimes with cavitation. Skin infection occurs most often after a wound becomes infected. In its severe form, the disease may involve septicemia and metastatic dissemination. In addition, chronic suppurative forms have been described in several organs.

In a patient returning from a stay in Southeast Asia, the infectious agents to be considered in a differential diagnosis of pulmonary involvement include tuberculosis, melioidosis and trematodes of the genus Paragonimus.

Treatment of melioidosis is often problematic because the bacterium is resistant to many agents. Ceftazidime has been used successfully against multiresistant strains (4) and laboratory sensitivity tests have recently confirmed its efficacy (5).

References:


mg/kg i.v. aux 6 h). Dès le lendemain, la fièvre tombe et la toux diminue. Après 10 jours de traitement, le patient est tout à fait asymptomatique et la radiographie pulmonaire de contrôle montre une régression quasi-complète de la lésion au sommet droit. L’intraveinothérapie dure 1 mois et on décide de la renforcer par 2 mois d’antibiothérapie orale avec de TMP/SMX (160 mg de TMP aux 12 h.). À sa visite de suivi en septembre 1988, le patient se porte toujours bien.

Discussion : Des prélèvements pour sérologie ont été pratiqués en début d’hospitalisation, puis expédiés au LLCM d’Ottawa, ainsi qu’aux CDC d’Atlanta. Ils se sont révélés positifs pour P. pseudomallei, avec un titre de 1 : 2048 par microhémagglutination.

Trois cas de méliodose ont été signalés dans la littérature médicale canadienne (1,2,3), et tous concernaient des réfugiés du Sud-Est asiatique. Dans cette région, l’infection inapparente est fréquente et des études sérologiques ont démontré la présence de titres d’antigènes importants dans jusqu’à 20 % des cas asymptomatiques. Le microorganisme causal peut rester latent pendant des mois, voire pendant de nombreuses années; et des atteintes concomitantes comme le diabète, des brûlures et l’alcoolisme ont souvent été associées à sa réactivation. La méliodose peut donc se déclarer ou réapparaître des années après que le sujet ait quitté la région d’endémie.

Le cas dont il est question ici semble être le premier sujet d’origine canadienne chez qui une méliodose, vraisemblablement aiguë, ait été décrite. De plus, le Laboratoire de santé publique du Québec précise n’avoir jamais eu connaissance d’un tel cas dans la province.

La majorité des cas de méliodose surviennent dans le Sud-Est asiatique ou chez des sujets qui y ont séjourné. Des cas sporadiques ont aussi été recensés en Inde, en Corée, aux Philippines, en Australie, à Panama, en Équateur et en Turquie.

Le P. pseudomallei est une bactérie de l’eau dont le passage à l’homme se fait directement à partir de l’environnement. La forme asymptomatique de l’infection est loin la plus fréquente, l’atteinte pulmonaire venant au second rang. Cette dernière peut être aiguë ou chronique, et est localisée de façon caractéristique aux lobes supérieurs, parfois avec formation de cavités. L’infection cutanée survient le plus souvent après la contamination d’une plaie. Dans les formes sévères de la maladie, il peut y avoir septiciémie et dissémination métastatique. Enfin, des formes suppurrées chroniques ont été décrites dans plusieurs organes.

Chez un patient rentrant du Sud-Est asiatique, les agents infectieux dont il faut tenir compte dans le diagnostic différentiel d’une atteinte pulmonaire incluent, outre des germes de la tuberculose et de la méliodose, les trematodes du genre Paragonimus.

Le traitement de la méliodose est souvent difficile du fait des multiples résistances de la bactérie. La ceftazidime a récemment été utilisée avec succès contre des souches multirésistantes (6) et son efficacité a été démontrée en laboratoire par des épreuves de sensibilité (6).

Références :


SOURCE: M. Germain, MD, Resident in Microbiology and Infectious Diseases, Hôpital de l’Enfant-Jésus, F. Auger, MD, G. Murray, MD, Department of Microbiology, Hôpital du Saint-Sacrement, Quebec City, Quebec.

International Notes

WILD POLIOVIRUS ISOLATION IN THE AMERICAS, 1988

Of the 1,735 probable cases of poliomyelitis reported in children under 15 years of age during 1988, stool samples were collected from 1,416 (82%). Poliovirus was isolated from only 53 of these samples. Most of these isolates are still under investigation for characterization (wild or vaccine-like). Preliminary data are presented in Table 1.

These data appear to indicate that the circulation of wild virus is now confined to a few areas of the Andean Region (Colombia, Peru, and Venezuela) and to the Northeastern Region of Brazil. However, these results should be interpreted with caution, since surveillance still requires improvement, particularly in early detection of cases and early collection of specimens. For example, only 48% of the samples were collected within 8 days of onset of paralysis.


Table 1 / Tableau 1

<table>
<thead>
<tr>
<th>Country / Pays</th>
<th>Total Cases With Stool Samples / Total des cas avec échantillons de selles</th>
<th>Total Isolates / Total des isolats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina/Argentine</td>
<td>16 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Bolivia/Bolivie</td>
<td>14 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil/Brésil</td>
<td>687 / 18</td>
<td></td>
</tr>
<tr>
<td>Chile/Chili</td>
<td>47 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Columbia/Columbia</td>
<td>149 / 1†</td>
<td></td>
</tr>
<tr>
<td>Dominican Republic / République dominicaine</td>
<td>7 / 0</td>
<td></td>
</tr>
<tr>
<td>Ecuador/Equateur</td>
<td>13 / 0</td>
<td>0</td>
</tr>
<tr>
<td>El Salvador/El Salvador</td>
<td>22 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Guatemala/Guatemala</td>
<td>57 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Haiti/Haïti</td>
<td>0 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Honduras/Honduras</td>
<td>81 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Mexico/Mexique</td>
<td>153 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Paraguay/Paraguay</td>
<td>12 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Peru/Pérou</td>
<td>84 / 14‡</td>
<td></td>
</tr>
<tr>
<td>Suriname/Suriname</td>
<td>4 / 0</td>
<td>0</td>
</tr>
<tr>
<td>Venezuela/Venezuela</td>
<td>70 / 10‡</td>
<td>10‡</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,416 / 53</td>
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† Wild virus / virus sauvage
‡ Not yet characterized / non caractérisé encore

Notes Internationales

ISOLEMENT DU POLIOVIRUS SAUVAGE DANS LES AMÉRIQUES, 1988

Sur les 1,735 cas probables de poliomyélite recensés en 1988 chez des enfants de moins de 15 ans, 1,416 (82%) ont fait l’objet d’un prélevement de selles. Le poliovirus n’a été isolé que dans 53 des échantillons. La caractérisation de la plupart des isolats (type sauvage ou pseudo-vaccinal) n’est pas encore terminée. Les données préliminaires figurent au Tableau 1.

D’après ces données, la circulation du virus sauvage semble cantonnée à quelques zones de la région des Andes (Colombie, Pérou et Venezuela) et au nord-est du Brésil. Ces résultats devraient toutefois être interprétés avec prudence, car la surveillance n’est pas au point, surtout sur le plan de la rapidité de la détection des cas et de la collecte des échantillons. Pour illustrer ce point, précisons que seulement 48% des spécimens ont été préllevés dans les 8 jours suivant l’installation de la paralyse.


Announcement

WORLD HEALTH STATISTICS ANNUAL 1988

The 1988 edition of this annual again presents a wealth of statistics, tables, and interpretive text designed to provide both country and global overviews of changing trends in health status and in causes of death and morbidity. Statistics, which are submitted to WHO by national health and statistical offices, are critically assessed in an effort to help countries monitor health trends and improve the management of their health systems.


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Annonce

ANNUAIRE DE STATISTIQUES SANITAIRES MONDIALES 1988

L’édition 1988 de cet annuaire est une mine de statistiques et de tableaux accompagnés de commentaires. Comme celles qui l’ont précédé, elle est destinée à donner une idée générale de l’évolution des tendances de la situation sanitaire et des causes de mortalité et de morbidité, aussi bien dans les pays qu’au niveau mondial. Les statistiques, qui sont communiquées à l’OMS par les autorités sanitaires et statistiques nationales, font l’objet d’une évaluation critique afin d’aider les pays à surveiller les tendances sanitaires et à améliorer la gestion de leurs systèmes de santé.
The book opens with an analysis of global statistics on 8 specific topics important to public health. These include maternal health, infant mortality, life expectancy, selected causes of death in developed countries, reported cases of smallpox and yellow fever since 1948, evolution of the global malaria situation, immunization coverage, and service coverage of water supply and sanitation. Trends for each are first depicted in a full-colour graph and then submitted to interpretive analysis. Some of the more striking observations include a sharp rise in lung cancer mortality among both men and women in developed countries, an estimated 2 million childhood deaths caused each year by measles, and an estimated 500,000 annual maternal deaths linked to childbirth and pregnancy. A brief overview of national trends in the number of AIDS cases concludes the global overview.

The second section provides an in-depth look at national statistics indicating the number of personnel in major health professions. Readers are given a series of regional tables, each displaying national data on the various health professions, followed by a comparison of the physician and population ratio with per capita gross national product. To bring to light the most significant facts behind the figures, the second part concludes with a discussion of the more serious management and health manpower development problems encountered by countries today.

The third section, devoted to vital statistics and life tables, summarizes the demographic situation of countries in terms of 3 sets of parameters (natality, mortality and life expectancy) selected for their relevance to health trend monitoring and management.

The final and most extensive section, running to some 400 pages, consists of a series of tabular statistics indicating detailed causes of death, by sex and age, for 51 countries and territories. For the first time, comprehensive statistics on the causes of death in the USSR are included. Also new is a table presenting background information on mortality statistics, including information on aspects of medical certification likely to influence the quality of the cause-of-death returns, on registration and coding procedures, and on populations covered by the statistics.

This bilingual publication, comprised of 513 pages, 8 colour plates and 16 tables, can be obtained in Canada from the Canadian Public Health Association, 1565 Carling Avenue, Suite 400, Ottawa, Ontario K1Z 8R1 (Tel.: (613) 725-3769) - Attention: Ms. L.A. Clarke. Cost is $91.50 per copy including postage and handling.

The Canada Diseases Weekly Report presents current information on infectious and other diseases for surveillance purposes and is available free of charge upon request. Many of the articles contain preliminary information and further confirmation may be obtained from the sources quoted. The Department of National Health and Welfare does not assume responsibility for accuracy or authenticity. Contributions are welcome (in the official language of your choice) from anyone working in the health field and will not be published elsewhere.

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Editor: Eleanor Paulson
Circulation: Dolly Riggins
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Laboratory Centre for Disease Control
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The annual debut by an analysis of the statistical data on 8 points of importance for public health: maternal mortality, infant mortality, the prevalence of disease, certain causes of death in developed countries, the case of smallpox and yellow fever since 1948, the evolution of the global situation, immunization coverage, and the service coverage of water supply and sanitation. Trends for each are first depicted in a full-colour graph and then submitted to interpretive analysis. Some of the more striking observations include a sharp rise in lung cancer mortality among both men and women in developed countries, an estimated 2 million childhood deaths each year by measles, and an estimated 500,000 annual maternal deaths linked to childbirth and pregnancy. A brief overview of national trends in the number of AIDS cases concludes the global overview.

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Le Rapport hebdomadaire des maladies au Canada, qui fournit des données pertinentes sur les maladies infectieuses et les autres maladies dans le but de faciliter leur surveillance, peut être obtenu gratuitement sur demande. Un grand nombre d'articles ne contiennent que des données sommaires mais des renseignements complémentaires peuvent être obtenus en se référant aux sources citées. Le ministère de la Santé nationale et du Bien-être social ne peut être responsable de l'exatetude, ni de l'authenticité des articles. Toute personne ouvrant dans le domaine de la santé est invitée à collaborer (dans la langue officielle de son choix) et la publication d'un article dans le présent Rapport ne empêche pas la publication ailleurs.

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Rédactrice en chef: Eleanor Paulson
Distribution: Dolly Riggins
Édition: Joanne Regnier

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