

The Investigation of First Indigenous Measles Case of A Foreigner in Taipei, 2016

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Abstract

On June 15, 2016, Taipei Regional Center, Centers for Disease Control was notified by a hospital in Taipei of a suspect measles case of a 29-year-old female caretaker from Indonesia. According to laboratory tests and clinical symptoms, she was considered as an indigenous measles case. Although this case was reported after the infectious period, health authority still implemented preventive measures, monitored and followed up 61 contacts. Indigenous measles cases are rarely reported in Taiwan recently. If a patient presents atypical or non-significant clinical symptoms, diagnosis would be difficult, resulting in delayed reporting. We suggest that health care providers should strengthen the knowledge on measles infection, and we encourage the medical institutions to report suspect cases. Identifying the sources of infection of indigenous measles cases is not easily achievable. We suggest setting the tracing rule of the contact in infectious period, to monitor the disease and evaluate the need for administering MMR vaccine in particular areas. In addition, approved foreign medical institutes should follow the regulation of Governing Management of the Health Examination of Employed Aliens, using the certified health examination form. We also suggest building the system for re-examination by health authority, and strengthen border quarantine.

Keywords: Measles, Investigating the source of infection, Health examination of foreign workers

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The Report of First Japanese Encephalitis Case in Taiwan in 2016

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Abstract

On May 11, 2016, a medical center in Tainan reported a 56-year-old female suspected of Japanese encephalitis (JE) virus infection in Alian District, Kaohsiung city. After examination, she was confirmed as JE infection and is the first case of JE in Taiwan in 2016. The public health authority immediately took preventive measures, such as health education, mosquito trapping, and promoting childhood immunization against JE. The case recovered and was discharged without sequela.

In Taiwan, due to the successful policy of JE immunization, only 16–37 JE cases, mostly middle-aged and elderly people, occurred each year in the recent decade. Because the vaccine does not provide life-long protection, we should enhance health education on knowledge of JE, strengthen mosquito control measures. People with high risks of JE infection should receive self-paid vaccination in health care facilities. We describe a typical JE case investigation, and share some experience of atypical cases we ever had.

Keywords : Japanese encephalitis, Immunization, Mosquito

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Weekly Data of Notifiable Infectious Diseases (by week of diagnosis)

Case diagnosis week		Week12		Week 1–12		
Classification	Disease Diagnosed ¹	2017	2016	2017	2016	
Category I	Plague	0	0	0	0	
	Rabies	0	0	0	0	
	SARS	0	0	0	0	
	Smallpox	0	0	0	0	
Category II	Acute Flaccid Paralysis	0	1	7	8	
	Acute Viral Hepatitis type A	14	22	174	128	
	Amoebiasis	10	6	83	58	
	Anthrax	0	0	0	0	
	Chikungunya Fever	0	0	2	2	
	Cholera	0	0	0	0	
	Dengue Fever	3	4	64	498	
	Diphtheria	0	0	0	0	
	Enterohemorrhagic E. coli Infection	0	0	0	0	
	Epidemic Typhus Fever	0	0	0	0	
	Hantavirus Pulmonary Syndrome	0	0	0	0	
	Hemorrhagic Fever with Renal Syndrome	0	0	1	1	
	Malaria	0	0	0	3	
	Measles	0	1	2	1	
	Meningococcal Meningitis	0	1	2	2	
	Paratyphoid Fever	0	0	3	0	
	Poliomyelitis	0	0	0	0	
	Rubella	0	0	0	3	
	Shigellosis	4	7	48	46	
	Typhoid fever	1	0	6	1	
West Nile Fever	0	0	0	0		
Category III	Acute Viral Hepatitis type B	6	1	42	20	
	Acute Viral Hepatitis type C ⁵	8	3	58	37	
	Acute Viral Hepatitis type D	0	0	1	1	
	Acute Viral Hepatitis type E	0	0	5	4	
	Acute Viral Hepatitis untype	0	0	0	0	
	Congenital Rubella Syndrome	0	0	0	0	
	Enteroviruses Infection with Severe Complications	0	0	1	1	
	Haemophilus Influenza type b Infection	1	0	2	2	
	Japanese Encephalitis	0	0	0	0	
	Legionellosis	3	1	24	26	
	Mumps ²	6	12	136	121	
	Neonatal Tetanus	0	0	0	0	
	Pertussis	1	0	4	2	
	Tetanus ²	0	1	2	2	
	Category IV	Botulism	0	0	0	1
		Brucellosis	0	0	0	0
Complicated Influenza		9	91	135	1678	
Complicated Varicella ⁴		1	0	6	10	
Endemic Typhus Fever		3	0	5	3	
Herpesvirus B Infection		0	0	0	0	
Invasive Pneumococcal Disease		11	12	146	205	
Leptospirosis		2	0	19	11	
Lyme Disease		0	0	0	0	
Melioidosis		0	0	6	2	
Q Fever		0	1	2	7	
Scrub Typhus		4	0	86	69	
Toxoplasmosis		1	1	4	3	
Tularremia	0	0	0	0		
Category V	Ebola Virus Disease	0	0	0	0	
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0	
	Novel Influenza A Virus Infections ⁶	0	0	1	0	
	Lassa Fever	0	0	0	0	
	Rift Valley Fever	0	0	0	0	
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0	
Yellow Fever	0	0	0	0		

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
2. Reported cases.
3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".
4. Since 2014/3/6, the case definition for confirmed Acute hepatitis C was changed from "meet the clinical **and** laboratory conditions" to "meet the clinical **or** laboratory conditions".
5. Since 2014/7/1, various subtypes of human cases of avian influenza are reported as "novel influenza A virus infections", a Category V Notifiable Infectious Disease. The original "H5N1 flu" and "H7N9 flu", which were respectively listed as a Category I Notifiable Infectious Disease and a Category V Notifiable Infectious Disease were removed from the list on the same day.
6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Thirty-four clusters were reported, including 2 tuberculosis clusters, 23 diarrhea clusters, 5 upper respiratory tract infection clusters, 3 influenza-like illness clusters and 1 varicella cluster.

Imported Infectious Diseases

- 11 confirmed cases were imported from 6 countries during Week 12 of 2017.

Country Disease	Indonesia	Thailand	Cambodia	Philippines	Myanmar	China	Total
Amoebiasis	3			1			4
DF	1	1			1		3
Hepatitis A			1			1	2
FluSC						1	1
Typhoid fever	1						1
Total	5	1	1	1	1	2	11

Note: The statistics listed in this table include imported cases that were either confirmed or updated^{*} in the previous week.

- A total of 159 confirmed cases were imported from 16 countries in 2017.
- Top 3 imported diseases : Dengue fever (64), Amoebiasis (42), Shigellosis (15).
- Top 3 countries responsible for most imported cases : Indonesia (65), Vietnam (19), Malaysia (17).

Summary of Epidemic

- **Diarrhea** : As the viral gastroenteritis season is upon us, the risk of clustered and sporadic cases remains.
- **Influenza** : According to the weather forecast, the diurnal temperature variation across Taiwan will remain pronounced. Therefore, it is likely that influenza activity will remain similar to that last week. H3N2 is currently the dominant strain circulating in the community.
- **Scrub Typhus** : The number of cases reported and confirmed increased. The affected areas primarily include Hualien County and Taitung County.

Weekly Data of Notifiable Infectious Diseases (by week of diagnosis)

Case diagnosis week		Week13		Week 1—13	
Classification	Disease Diagnosed ¹	2017	2016	2017	2016
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	3	1	10	9
	Acute Viral Hepatitis type A	12	21	186	149
	Amoebiasis	11	11	94	69
	Anthrax	0	0	0	0
	Chikungunya Fever	1	1	3	3
	Cholera	0	0	0	0
	Dengue Fever	5	8	69	506
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	1	1	2
	Malaria	0	0	0	3
	Measles	1	0	3	1
	Meningococcal Meningitis	2	0	4	2
	Paratyphoid Fever	0	0	3	0
	Poliomyelitis	0	0	0	0
	Rubella	0	0	0	3
	Shigellosis	4	4	52	50
	Typhoid fever	0	0	6	1
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	5	1	47	21
	Acute Viral Hepatitis type C ⁵	5	8	63	45
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	0	5	4
	Acute Viral Hepatitis untype	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	1	1	2
	Haemophilus Influenza type b Infection	0	0	2	2
	Japanese Encephalitis	0	0	0	0
	Legionellosis	4	2	28	28
	Mumps ²	11	16	147	137
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	0	5	2
	Tetanus ²	0	0	2	2
	Category IV	Botulism	0	0	0
Brucellosis		0	0	0	0
Complicated Influenza		14	51	148	1729
Complicated Varicella ⁴		0	1	6	11
Endemic Typhus Fever		0	0	5	3
Herpesvirus B Infection		0	0	0	0
Invasive Pneumococcal Disease		10	14	156	219
Leptospirosis		0	0	19	11
Lyme Disease		0	0	0	0
Melioidosis		0	1	6	3
Q Fever		0	1	2	8
Scrub Typhus		0	1	86	70
Toxoplasmosis		1	0	5	3
Tularremia	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections ⁶	0	0	1	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
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6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Forty-three clusters were reported, including 11 tuberculosis clusters, 23 diarrhea clusters, 7 upper respiratory tract infection clusters, 1 influenza-like illness cluster and 1 varicella cluster.

Imported Infectious Diseases

- 18 confirmed cases were imported from 8 countries during Week 13 of 2017.

Disease \ Country	Indonesia	Vietnam	Malaysia	China	Japan	Ecuador	Thailand	Philippines	Unknown	Total
DF	1		2			1	1			5
Hepatitis A		2						1		3
Amoebiasis	3									3
FluSC				1	1					2
Shigellosis	2									2
Chikungunya Fever	1									1
Measles									1	1
Legionellosis	1									1
Total	8	2	2	1	1	1	1	1	1	18

Note: The statistics listed in this table include imported cases that were either confirmed or updated* in the previous week.

- A total of 176 confirmed cases were imported from 16 countries in 2017.
- Top 3 imported diseases : Dengue fever (69), Amoebiasis (45), Shigellosis (17).
- Top 3 countries responsible for most imported cases : Indonesia (73), Vietnam (21), Malaysia (19).

Summary of Epidemic

- Diarrhea** : As the viral gastroenteritis season is upon us, the risk of clustered and sporadic cases remains.
- Influenza** : According to the weather forecast, the diurnal temperature variation across Taiwan has remained pronounced. Therefore, mild influenza activity has increased slightly. H3N2 is currently the dominant strain circulating in the community.
- Scrub Typhus** : The number of cases reported and confirmed are expected to increase. The affected areas primarily include Hualien County and Taitung County.

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