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FEATURE IN FOCUS

2018/19 New Initiatives to Promote Seasonal Influenza Vaccination Among School Children

Reported by Dr Emily MAN, Medical and Health Officer, Programme Management and Professional Development Branch, CHP

In 2017/18 winter influenza season, 600 Influenza-like illness (ILI) outbreaks were recorded, which exceeded the numbers recorded in major flu seasons in previous five years. Most ILI outbreaks occurred in schools, including kindergartens/child care centres (KG/CCC) and primary schools. Weekly influenza admission rates in public hospitals were highest among young children 0-5 years (8.63 per 10 000 population), followed by elderly ≥ 65 years (4.25) & children 6-11 years (3.81). While severe cases mainly affected the elderly, 20 cases of severe paediatric influenza-associated complication/ death (including two deaths) were recorded, and 19 (95%) of whom had not received the 2017/18 seasonal influenza vaccine.

To promote Seasonal Influenza Vaccination (SIV) among school children, in 2018/19, the Government launches the School Outreach Vaccination Pilot Programme (Pilot Programme) and the Enhanced Vaccination Subsidy Scheme Outreach Vaccination (Enhanced VSS), in addition to continuation of Vaccination Subsidy Scheme (VSS) in private clinics.

Under the Pilot Programme, primary school children will receive free SIV at participating schools. There are two types of outreach teams, namely Department of Health Outreach Team (DH mode) and Public-Private-Partnership Outreach Team (PPP mode). For both modes, the Department of Health (DH) will arrange procurement and delivery of vaccines, collection of unused vaccines and clinical waste, as well as administrative support. Vaccination will be performed by outreach teams either from DH or private doctors participating in PPP mode. An injection fee HKD\$70 per dose will be provided for PPP doctors. A total of 184 primary schools, including 35 DH mode and 149 PPP mode, will join the Pilot Programme.

Under Enhanced VSS, primary schools, kindergartens, kindergarten-cum-child care centres, child care centres and primary section of special schools can invite enrolled Enhanced VSS doctors to provide free SIV service for students who are Hong Kong residents. The enrolled Enhanced VSS doctors are responsible for procurement and delivery of vaccines, administration of vaccines, collection of unused vaccines and clinical waste as well as administrative support. Currently, there are more than 90 doctors on the "List of Doctors Providing Enhanced VSS Outreach Vaccination at School-setting". Their names and information are available on Centre for Health Protection (CHP) website.

Besides the above new initiatives, children between the age of six months and less than 12 years or primary school students (Hong Kong residents) continue to be eligible for Vaccination Subsidy Scheme (VSS) in private clinics. The subsidy level for seasonal influenza vaccination has been increased to HKD\$210 per dose. Participating doctors may impose extra charges. Charges and details are listed on CHP website.

For children between six months and less than 12 years old, or 12 years old or above but attending a primary school in Hong Kong; and come from families receiving Comprehensive Social Security Assistance or holders of valid Certificate for Waiver of Medical Charges issued by the Social Welfare Department, under Government Vaccination Programme, they can get free SIV in Maternal and Child Health Centres (MCHC) or Student Health Service Centres (SHSC) of DH. Children from six months to under six years old or attending kindergartens or child care centres can get free SIV in MCHC, while children from six years to under 12 years old or age 12 or above but attending primary schools can get free SIV in SHSC.

DH will continue to work closely with health care sectors, community partners and education sectors to promote vaccination. DH will publicise through various media activities including TV and radio, websites/ facebook, briefing session, specialist interviews, videos, articles to newspapers and magazines, leaflets and posters, advertisements, as well as health education hotline.

For latest information, please visit following webpage for details: <https://www.chp.gov.hk/en/features/17980.html>. You may also contact vaccination office hotline at 2125 2125.

Review of grayanotoxin poisoning in Hong Kong, 2012-2018

Reported by Dr Albert LAM and Dr Ambrose WONG, Senior Medical and Health Officer, Field Epidemiology Training Programme, Surveillance and Epidemiology Branch, CHP.

Grayanotoxin poisoning is caused by ingestion of plants or products containing grayanotoxins which are derived from plants belonging to the *Ericaceae* family, including rhododendrons. Grayanotoxin poisoning caused by consumption of honey is called “mad honey poisoning” and honey containing grayanotoxins often has bitter taste. Grayanotoxin poisoning is well-known in the Black Sea area of Turkey and Nepal but has also been reported in other countries. Grayanotoxins are neurotoxins which can affect nerves and muscles. Symptoms of grayanotoxin poisoning include nausea, vomiting, diarrhoea, dizziness, weakness, excessive perspiration, hypersalivation and paraesthesia shortly after ingestion, usually within 20 minutes to three hours. In severe cases, hypotension, bradycardia or shock may occur^{1,2}.

Food poisoning is a statutory notifiable disease in Hong Kong. Medical practitioners are required to report suspected or confirmed cases to the Centre for Health Protection (CHP) of the Department of Health (DH). Grayanotoxin poisoning is a type of biochemical food poisoning that was occasionally reported in Hong Kong. In this article, we reviewed grayanotoxin poisoning cases recorded by CHP from January 2012 to September 24, 2018.

During the study period, a total of seven grayanotoxin poisoning cases affecting nine persons were recorded. The annual number of reported cases ranged from zero to three, with each case affecting one to three persons (median: one person) (Figure 1). The cases were reported almost all over the year with no seasonal trend observed.

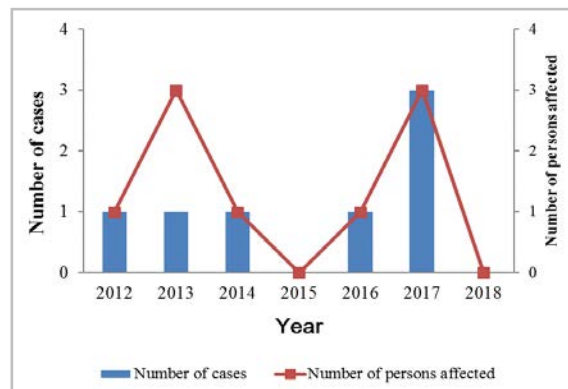


Figure 1 - Grayanotoxin poisoning cases/ persons affected recorded from 2012 to 2018 (as of September 24, 2018).

Fifty-six percent of the affected persons were male. Patient's ages ranged from 30 to 66 years with a median of 49 years. The most common presenting symptoms were systemic or neurological in nature including dizziness (7, 78%), numbness (5, 56%) and sweating (5, 56%). Gastrointestinal symptoms such as vomiting (4, 44%), abdominal pain (3, 33%), nausea (3, 33%) and diarrhoea (1, 11%) were less commonly reported. The patients developed symptoms from five minutes to two hours (median: one hour) after consumption of the incriminated food item. All affected persons had hypotension, bradycardia and required hospital admission. Two required admission to Coronary Care Unit and one required admission to Intensive Care Unit for management. There was no fatality recorded.

The diagnosis of grayanotoxin poisoning is based on food consumption history, presenting symptoms, and detection of grayanotoxin in patient's clinical specimen and/ or in food or plant sample. Among the nine affected persons, eight (88.9%) of them had urine sample tested positive for grayanotoxin and one had no clinical sample available for testing. Among the seven cases, honey or plant samples obtained from the patients were all tested positive for grayanotoxin.

Among the seven cases, six of them consumed honey bought (1, 16.7%) or given by friends (5, 83.3%) from Nepal. One affected person consumed wild picked flower (杜鹃花) in Hong Kong.

To avoid grayanotoxin poisoning, members of the public are advised to buy honey from reliable sources and apiaries; discard honey with a bitter or astringent taste because grayanotoxin-containing honey may cause a burning sensation in the throat; pay special attention to honey from Nepal and the Black Sea region of Turkey as there have been grayanotoxin poisoning cases connected with honey from these areas.

References

- ¹Jansen, S.A., et al., Grayanotoxin poisoning: 'mad honey disease' and beyond. *Cardiovasc Toxicol*, 2012. 12(3): p. 208-15.
- ²Chen, S.P., et al., Mad honey poisoning mimicking acute myocardial infarction. *Hong Kong Med J*, 2013. 19(4): p. 354-6.

NEWS IN BRIEF

A sporadic case of listeriosis

On September 12, 2018, the Centre for Health Protection (CHP) recorded a sporadic case of listeriosis affecting a 75-year-old man with end-stage renal failure on continuous ambulatory peritoneal dialysis. He presented with fever, abdominal pain, turbid peritoneal fluid and diarrhoea on September 8, and was admitted to a public hospital on the same day. His peritoneal dialysate collected on September 8 yielded *Listeria monocytogenes*. He was treated with antibiotics and his condition was stable. He had no recent travel history except for a day trip to Shenzhen on September 5 and he denied high risk food consumption during the incubation period. His home contacts were asymptomatic.

A probable case of sporadic Creutzfeldt-Jakob disease

On September 13, 2018, CHP recorded a probable case of sporadic Creutzfeldt-Jakob disease (CJD) affecting a 65 year-old man with underlying illness. He presented with mental dullness and left upper limb twitching on July 13, and had hospital admission for convulsion in mid-July and early August respectively. He developed convulsion again on August 16 and was admitted to a public hospital on the same day. He was noted to have rapidly progressive dementia, pyramidal signs and akinetic mutism. Investigations showed that his cerebrospinal fluid was tested positive for 14-3-3 protein and his electroencephalography findings were compatible with CJD. He was transferred to another public hospital for further management on August 27 and his condition was stable at the time of reporting. No risk factors for either iatrogenic or variant CJD were identified. He was classified as a probable case of sporadic CJD.

A sporadic local case of *Streptococcus suis* infection

On September 13, 2018, CHP recorded a case of *Streptococcus suis* infection affecting a 77-year-old female with underlying illnesses. She presented with fever, muscle pain and dizziness on September 11, and was admitted to a public hospital on the same day. Her blood culture collected on September 12 yielded *Streptococcus suis* and she was treated with antibiotics. Her condition remained stable. She handled raw pork at home daily but could not recall any recent wound or injury. She had no recent travel history. Her home contacts were asymptomatic.

Three domestic clusters of pertussis

From September 7 to 21, 2018, CHP recorded three domestic clusters of pertussis.

The first cluster affected a two-month-old baby boy and his 33-year-old father. The baby had developed cough since August 24, 2018. He attended the Accident and Emergency Department of a public hospital and was subsequently admitted to paediatric ward on September 4. His pernasal swab collected on September 5 was tested positive for *Bordetella pertussis*. He was treated with antibiotics. He remained stable all along and was discharged on September 11. He received his first dose of diphtheria, tetanus, acellular pertussis and inactivated poliovirus vaccine (DTaP-IPV) on August 24 just before symptom onset.

Epidemiological investigation revealed that his father had developed cough since September 10. His pernasal swab collected on September 10 was tested positive for *Bordetella pertussis*. He was treated with antibiotics. His condition was stable. He was not sure about his vaccination history. Both patients had no travel history during the incubation period.

The second cluster affected a 52-year-old man and his 14-year-old son. The man with underlying illnesses had presented with cough and inspiratory whoop since August 17. He consulted private doctors, attended an outpatient clinic and the Accident and Emergency Department of a public hospital from August to September. His nasopharyngeal swab collected on September 11 was tested positive for *Bordetella pertussis*. He was treated with antibiotics and his condition was stable. He was not sure about his vaccination history.

Epidemiological investigation revealed that his son had developed cough since September 9. He attended the outpatient clinic of a public hospital on September 14. His nasopharyngeal swab collected on September 14 was tested positive for *Bordetella pertussis*. He was treated with antibiotics and his condition was stable. He had completed 6 doses of DTaP-IPV according to the Hong Kong Childhood Immunisation Programme (HKCIP). Both patients had no travel history during the incubation period.

The third cluster affected a two-month-old baby girl and her four-year-old brother. The baby girl had developed cough since August 24, 2018. She attended the Accident and Emergency Department of a public hospital and was subsequently admitted to the paediatric ward on September 9. Her pernasal swab collected on September 11 was tested positive for *Bordetella pertussis*. She was treated with antibiotics. She remained stable all along and was discharged on September 13. The girl had not yet received her first dose of DTaP-IPV.

Epidemiological investigation revealed that her elder brother had developed cough since September 15. His pernasal swab collected on September 18 was tested positive for *Bordetella pertussis*. He was treated with antibiotics. His condition was stable. He had DTaP-IPV vaccine according to HKCIP. Both patients had travelled to Fujian, China during incubation period.

Two local cases of human myiasis

From May 1 to September 24, CHP recorded two cases of human myiasis. The first case was a 65-year-old male with underlying illnesses. He was a resident of a residential care home for the elderly (RCHE) in Sham Shui Po with no recent travel history. He presented with fever and left facial swelling on June 12, and was admitted to a public hospital on the same day. Physical examination of his oral cavity revealed extensive palatal ulcers with worms and dental caries. Computer tomography of the face and neck showed left dental abscess. The clinical diagnoses were dental abscess and oral myiasis. He was treated with antibiotics. His condition remained stable and he was discharged on June 20.

The second case was an 83-year-old woman with underlying illnesses. She was also a resident of a RCHE in Tsuen Wan with no recent travel history. She presented with gum bleeding on September 3 and was admitted to a public hospital on the same day. Physical examination found a large ulcer and worms in her oral cavity. The clinical diagnosis was oral myiasis and she was treated with antibiotics. She passed away on September 7 due to other illness.

The worms removed from both cases were confirmed to be larvae of *Chrysomya bezziana*. Advice on wound care and environmental hygiene was given to the RCHEs concerned during site visit. There were no other myiasis cases identified in the two RCHEs and investigations so far did not identify epidemiological linkage between these two cases.