Abstract Title:
Outbreak of gastroenteritis after eating at a local restaurant on Easter Sunday, 16th April 2017.

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Abstract

Background

On the 18th April 2017, the Infectious Disease Prevention and Control Unit (IDCU) was contacted directly by the public and informed of an outbreak of gastroenteritis affecting 2 separate groups of people who had Easter Sunday Lunch at a restaurant on 16th April 2017. An outbreak investigation was launched in order to implement appropriate control measures.

Methods

We conducted a retrospective cohort study. A case was defined as persons who had consumed food at the restaurant on 16 April 2017 and developed diarrhoea (three or more loose stools in 24 hours) within 72 hours. We contacted the owner of the restaurant and obtained a list of all bookings the restaurant had that day as well as a detailed food menu served for Easter lunch. We also utilized social media in order to identify any additional contacts using the official webpage of the restaurant. We collected risk exposures using standard food questionnaires. We calculated risk ratios (RR) and 95% confidence intervals (95% CI). Two stool samples from one person were collected and analyzed. An environmental health inspection of the premises was performed.

Results

Of approximately 200 persons, 178 (89%) participated in the study. 59 (33.1%) met the case definition with onset dates from 16/04/2017 to 17/04/2017. 13 (22.0%) and 47 (79.7%) cases had developed symptoms in the first 12 hours and 18 hours respectively. No cases were hospitalized. Univariate analyses showed that cases were more likely to have consumed spaghetti marinara (RR=1.61, 95% CI: 1.07 to 2.43; p=0.032), rib eye steak served with mushroom sauce (RR=6.24, 95% CI: 3.67 to 10.62; p<0.005), chips (RR=2.59, 95% CI: 1.03 to 6.55; p=0.018) and vegetables (RR=1.65, 95% CI: 1.10 to 2.46; p=0.019). The two stool samples were negative. Environmental inspections did not identify deficiencies in hygiene and food safety practices. Ghost meals were not prepared. Environmental samples were negative.

Conclusions
Epidemiological evidence suggests a point source outbreak where the likely vehicle was the rib eye steak served with mushroom sauce; however the causative agent remains unknown.

Message

This study highlights the importance of:

1. epidemiological investigations
2. the use of social media
3. establishment to keep ghost meals
4. early notification of outbreaks to health authorities to conduct timely investigations and find any samples for analysis
5. finding cases more willing to submit samples
6. safeguarding food safety, especially when planning for large events