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Hepatitis A in a Food Handler—Kodiak, February 2003

Background

On February 18, 2003, a food handler (Patient A) who routinely glazed and garnished doughnuts at Deli A in Kodiak, had onset of fever and diarrhea. Patient A continued to work for 4 of the next 5 days. On February 24, Patient A was jaundiced and sought medical attention. An IgM anti-hepatitis A virus (HAV) and liver function tests were drawn that day. Patient A's liver enzymes were markedly elevated (Table 1), and on February 26, the serologic test for HAV was positive.

Investigation

On February 27, Epidemiology staff flew to Kodiak to determine the risk of HAV exposure to the community. An extensive interview with Patient A did not identify any significant risk factors or potential exposures to HAV during the interval from 3-5 weeks prior to illness onset.

During the week prior to developing jaundice, the most infectious period, Patient A glazed and garnished doughnuts without wearing gloves. Patient A described adequate hand washing practices.

Alaska Department of Environmental Conservation (DEC) staff performed a detailed inspection of Deli A. No significant problems were found with regard to food storage or preparation procedures.

Patient A's seven household contacts and six Deli A coworkers were all interviewed about symptoms for HAV and each had blood drawn for liver function and IgM anti-HAV testing. Liver transaminase testing for all contacts was normal.

Table 1.

	Patient A	Normal Range
Total Bilirubin	12.4	0.0-1.2 mg/dl
Conjugated Bilirubin	10.4	0.0-0.3 mg/dl
Alkaline Phosphatase	170	50-136 u/L
AST (SGOT)	1049	15-37 u/L
ALT (SGPT)	2909	30-65 u/L

Summary

During the week prior to developing jaundice, an ungloved food handler, acutely ill with HAV infection, glazed and garnished doughnuts in a Kodiak deli.

Deli A patrons who consumed doughnuts from February 16-26 were at potential risk of HAV infection.

Administration of IG to susceptible exposed patrons could prevent illness.

Discussion

In recent years, community wide outbreaks have accounted for most HAV disease transmission, although common source outbreaks due to food contamination by food handlers continue to occur (1).

Due to the 15-50 day incubation period, HAV foodborne outbreaks are usually detected long after persons become infected. Consequently, because immune globulin (IG) must be given within two weeks of exposure to the virus, these outbreaks are usually detected too late for IG administration to provide prophylactic protection.

In this circumstance, no outbreak was identified. Rather, an acutely ill HAV-infected food handler was identified, and susceptible patrons who were exposed were deemed to be at risk for HAV infection.

Public Health Actions Taken

In cooperation with Deli A management, DEC, and Kodiak Public Health staff, a press release was distributed by Alaska Division of Public Health on February 28, alerting susceptible patrons who consumed Deli A doughnuts from February 16-26 that they could receive free IG prophylaxis.

IG and HAV vaccine were offered to all susceptible household contacts and coworkers of Patient A.

A public health notice was distributed to Kodiak health care providers on February 28, alerting them of the investigation. Providers were advised to be watchful for additional HAV patients.

A total of 476 persons received IG, and 24 persons received HAV vaccine.

Recommendations

1. Food handlers who are ill with diarrhea should not be allowed to handle food until their diarrhea has cleared.
2. Food handlers with hepatitis A infection should not be allowed to handle food until seven days after the onset of jaundice.
3. Due to the long incubation period (15-50 days), clinicians in Kodiak should continue to consider hepatitis A infection in any patient who presents with new onset of fever, anorexia, nausea, abdominal discomfort, diarrhea, or jaundice.
4. Clinical diagnosis should be confirmed by a positive serology for anti-HAV IgM.
5. All persons with suspected HAV infection should be reported immediately to the Section of Epidemiology to facilitate prompt investigation and appropriate prophylaxis. The Section of Epidemiology can facilitate transport of serum specimens to the State of Alaska Public Health Laboratory-Fairbanks for rapid test results. **To report, call 907-269-8000 during business hours or 800-478-0084 after hours.**

Reference

1. Chin J, ed. Control of Communicable Diseases Manual, 17th Edition, American Public Health Association, 2000, pp. 238-243.