<1 in 10 were hospital onset. Also, two-thirds of treated disease cases were MSSA; most were SSTIs.
Funding: Proprietary Organization: Pfizer.
Disclosures: Scott Fridkin, consulting fee - vaccine industry (spouse).
Doi:10.1017/ice.2020.573

Presentation Type:
Top Rated Posters

Transmissible Spongiform Encephalopathies: An Underrecognized Infection Control Issue

Christina Kaul, Zucker SOM at Hofstra/Northwell; Aradhana Khameraj, NSUH; Prashant Malhotra, Zucker SOM at Hofstra/Northwell; Bruce Farber, Zucker SOM at Hofstra/Northwell

Background: Transmissible spongiform encephalopathies comprise a class of rapidly progressive and inevitably fatal degenerative brain disorders. The pathogenesis of these diseases is thought to be due to a change in the structure of the normal prion protein to an abnormal structure, leading to propagation of the abnormal protein. This abnormal protein is highly transmissible; thus, appropriate infection control measures should be put in place if the diagnosis is suspected. However, the diagnosis is often not considered at all, and many hospitals do not have protocols in place. Our hospital missed a case of familial fatal insomnia in a 45-year-old male. He was diagnosed with fatal familial insomnia by autopsy. The autopsy was performed without appropriate infection control measures, leading to costly contamination of medical instruments and exposure of multiple staff. This occurrence led our institution to re-evaluate hospital protocols and guidelines regarding workup and management of transmissible spongiform encephalopathies (TSEs). **Methods:** We reviewed cases of TSEs or Creutzfeldt-Jakob Disease (CJD)-like illness presenting to our hospital over a 30-month period. Patients were considered for inclusion based on clinical suspicion. CDC diagnostic criteria were used. Infection control measures were employed, including an alert in the EMR. MRI was then performed. If clinical or diagnostic suspicion was high, the patient underwent lumbar puncture. CSF results were reviewed based on criteria Creutzfeldt-Jakob Disease Foundation criteria. Infection control measures were maintained throughout hospitalization. **Results:** In total, 34 patients met the inclusion criteria: 8 patients had confirmed CJD and 25 were negative. Medical records were not available for 1 patient, who was excluded. Lumbar puncture was performed on all suspected cases. Of those confirmed cases, the 7 patients who underwent lumber puncture had a positive result for 14-3-3 protein. Also, 5 patients underwent RT-QuIC testing and were found to have a positive result. No further cases of contamination occurred using our protocol. Additionally, 1 patient with suspected CJD underwent a brain biopsy with appropriate precautions after an inconclusive lumbar puncture. Although biospy was negative, the case exemplifies how the initiation of a protocol can optimize the workflow and prevent potentially dangerous exposure. **Conclusion:** Diagnosis of TSEs remains difficult and is often missed. In our case, lack of suspicion for TSE led to a waste of resources and unnecessary exposure of staff member. It is of utmost importance to consider TSEs in rapidly progressive dementia and to employ appropriate sterile guidelines to prevent contamination of equipment and potential subsequent transmission. Healthcare providers should consider a similar protocol in cases suspicious for TSEs.
Funding: None
Disclosures: None
Doi:10.1017/ice.2020.574

Presentation Type:
Top Rated Posters

Use of Simulations to Evaluate the Effectiveness of Barrier Precautions for Prevention of pathogen Transmission

Heba Alhmidi, The Cleveland VA Medical Research & Education Foundation; Daniel Li, Northeast Ohio VA Healthcare System; Jennifer Cadnum, Cleveland VA Medical Center; Natalia Pinto Herrera, Northeast Ohio VA Healthcare System; Muhammed Fawwaz Haq, Northeast Ohio VA Healthcare System; Annette Jencson; Brigid Wilson, Northeast Ohio VA Healthcare System; Curtis Donskey, Cleveland VA Medical Center

Background: Barrier precautions (eg, gloves and gowns) are often used in clinical settings to reduce the risk for transmission of healthcare-associated pathogens. However, uncertainty persists regarding the efficacy of different types of barrier precautions in preventing transmission. **Methods:** We used simulated patient care interactions to compare the effectiveness of different levels of barrier precautions in reducing transfer of pathogen surrogate markers. Overall, 30 personnel performed standardized examinations of contaminated mannequins while wearing either no barriers, gloves, or gloves plus cover gowns followed by examination of a noncontaminated mannequin; the order of the barrier precautions was randomly assigned. Participants used their usual technique for hand hygiene, stethoscope cleaning, and protective equipment removal. The surrogate markers included cauliflower mosaic virus DNA, bacteriophage MS2, nontoxigenic *Clostridium difficile* spores, and a fluorescent tracer. We compared

Figure. Transfer of surrogate markers during simulated exams by hands (A) and stethoscopes (B)

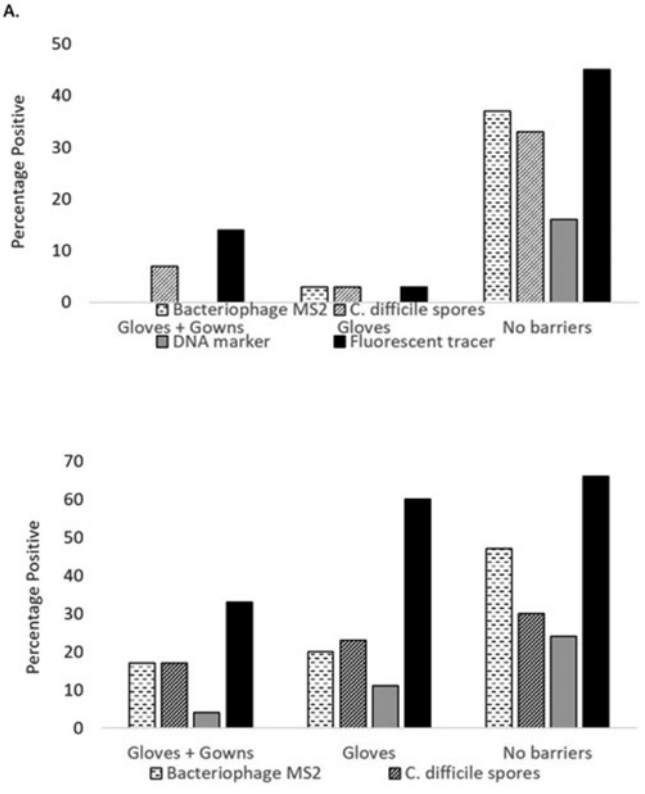

Fig. 2.