Abstract

A retrospective study of CDAD was conducted reviewing ED admission and discharge data of 5039 patients presenting with diarrhoea between January 1, 2002 and December 31, 2007. Variables included are

- epidemiological: age, sex, origin and dismissal, as well as
- bacteriological: CD-culture and CD-toxin analysis.

Methods

To identify the importance of the emergency department (ED) as an entry point of CDAD and hence, as a determinant for timely and effective hospital infection control.

Aim

To identify the importance of the ED as an entry point of CDAD and as a main determinant for timely and effective hospital infection control, since its case mix consists of patients at high risk of both introducing and acquiring infections.

Background

Alerted by the rise and severity of nosocomial Clostridium difficile (CD)-associated disease (CDAD) and the high suspicion of import diarrhoea, a tertiary care teaching hospital set up a hospital-wide infection control (IC) programme, aiming at

- increasing CDAD-detection
- improving standard precautions
- organizing IC practitioner rounds
- environmental disinfection with hypochlorite
- early contact isolation and per oral vancomycine antibiotic treatment.

CD ribotype 027 has been documented in Belgium since the end of 2002, the last severe outbreak occurring in September 2005. To date CD ribotype 027 in Belgium accounts for 23% of all strains tested.

CD-detection effort (%) = (N° of CD-analyses performed / N° of patients presenting with diarrhoea)

Results

The mean total detection effort in the ED is 40% (range 32% – 59%) and the ED recovery rate is high (8.5%).

- Age above 65 seems justifying isolation, despite putting an increased burden on ED resources.
- A rising CD-detection effort in the ED year by year and an almost constant but high ED-recovery rate indicates increasing awareness from and effectiveness of ED health care personnel.
- Patients aged above 65 represent 68.5% of the CDAD affected. Hospital admission for diarrhoea over the study period: 34% (2002), 32% (2003), 35% (2004), 40% (2005), 41% (2006) and 59% (2007).

Conclusion

1. Increasing ED awareness and a high CD-recovery rate stress the importance of the ED in expediting case detection.
2. The high hospitalisation rate of patients presenting with diarrhoea and a clear import pattern moreover urge for early prevention of transmission by timely syndromic application of contact precautions.
3. Above 65 years of age, quarantine may be warranted in all diarrhoeic patients, yet not workable in an ED. Isolation based on risk factors (comorbidity, previous antibiotic or antacid exposure or CDAD history) seems more feasible. Therefore, this case mix of ED patients needs more refinement.
4. In the mean time, clinical condition based IC practices should emphasise on hand hygiene, high touch surface disinfection and careful selection and handling of medical items.

Background

To identify the place of the emergency department (ED) as an entry point of Clostridium difficile (CD)-associated disease (CDAD) and hence, as a determinant for timely and effective hospital infection control.

Aim

To identify the place of the ED as an entry point of CDAD.

Methods

A retrospective study of CDAD was conducted reviewing ED admission and discharge data of 5039 patients presenting with diarrhoea between January 1, 2002 and December 31, 2007. Variables included are

- epidemiological: age, sex, origin and dismissal, as well as
- bacteriological: CD-culture and CD-toxin analysis.

Results

The mean annual patient presentation in the ED during the study period was 49534. On average 840 patients annually presented with diarrhoea.

Conclusion

- The mean annual patient presentation in the ED during the study period was 49534. On average 840 patients annually presented with diarrhoea.
- A total of 2018 CD-analyses were performed, showing a mean total detection effort of 40%, yet increasing over the study period: 34% (2002), 32% (2003), 35% (2004), 40% (2005), 41% (2006) and 59% (2007).
- Of these, 169 (originating from 149 patients) were found CD-toxin positive, indicating a CD-recovery rate of 8.5%. This high recovery rate is almost threefold the overall hospital detection yield.
- Of the studied ED patients, 27% were aged above 65, representing 68.5% (102/149) of the CDAD affected.
- Hospital admission for diarrhoea (3124 out of 5039) accounted for 62%.
- Only 4.5% were transferred from long-term care facilities.
- There was no sex difference observed.

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