Persistent cough? Pertussis may be lurking behind you

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B. pertussis infections in adults are common, endemic, and yet mostly unrecognized by physicians treating adult patients

Pertussis

- Infectious bacterial disease caused by Bordetella Pertussis

- Mortality rate in babies from pertussis is approximately 2%
We are not the only one

In the period from April to October 1977, an epidemic of pertussis in the outpatient population of a large metropolitan hospital involved 115 diagnosed cases


- In 2003, 17 symptomatic cases of pertussis were
- Reported among health care workers (HCWs) resulted from a 1–day exposure to an infant who was later confirmed to have pertussis

Recommendation for vaccinations

- Hospitals and ambulatory-care facilities should provide Tdap for HCW and use approaches that maximize vaccination rates.
  - CDC Immunization of Health-Care Personnel Recommendations of the Advisory Committee on Immunization Practices (ACIP) MMWR, Recommendations and Reports / Vol. 60 / No. 7 November 25, 2011

- The Israeli health authorities suggested in 2009 inoculating all HCW in Israel with TdaP, with the cost to be paid by the employer.
Needed but expensive about 17 $ each
Diagnosis according to serology for Pertussis

- IgG greater than 50iu or
- Positive IgM or
- Positive IgA

- some of the uncertain results were repeated 2–3 weeks following the initial exam.

- We considered one positive result to be sufficient for diagnosing Pertussis
"transition junction"

- Internist
- A nurse in his department
  - Internal medicine consultant for the maternity ward
- 2 Sick nurses in maternity ward
- 1 coughing nurse in maternity ward
- Other coughing employees
- 1 midwife
- 1 Works also in newborn
- 6 sick employees
- All were present at the same staff meeting
“Transition junction”

- hospital dining room
- staff meetings
- personal relationship between workers in different departments
After 4 months

- There were 2 sick employees in the intensive care neonatal department
Suspected Pertussis questionnaire

- Demographic details including department
- How long have you been coughing?
- Do you suffer from coughing attacks, or do you feel you are choking or about to vomit?
- Is some one else coughing in your family? Children? How old are the children?
- Do you smoke? Is the cough similar to that from smoking or prior asthmatic attacks?
- Do you have muscle pain?
Incidence

INCIDENCE

0 14 3 20 11 2 4 9

q1-2010 q2-2010 q3-2010 q4-2010 q1-2011 q2-2011 q3-2011 q4-2011
Incidencia / prophyaxis
Prophylactic treatment

1431 employees received prophylactic treatment by the end of 2011

180 women admitted for childbirth received prophylaxis

292 infants and 110 premature newborns received prophylaxis

439 immunosuppressed hemato- oncological patients.
Incidence, prophylaxis & vaccinations

Graph showing incidence, prophylaxis, and vaccinations over quarters from q1-2010 to q4-2011.
We do not allow any new employees to begin working without first receiving Pertussis vaccination, even if they will not be in contact with patients.
% of Positive Exams

% positive exams

q1-2010: 0%
q2-2010: 39%
q3-2010: 30%
q4-2010: 32%
q1-2011: 34%
q2-2011: 38%
q3-2011: 33%
q4-2011: 53%
Despite our efforts there may be sick people who do not report their illness.
Discussion

- Pertussis is not only an occupational disease, but it does in any case have an even greater significance when health care personnel who treat children and immunosuppressed patients become ill.
Recommendations

Guidelines for diagnosing pertussis among health care worker should be written and used in all health care settings.
Further Recommendations

- Current vaccines against pertussis have proven their safety and efficacy in large-scale clinical trials
  - Should be given on a mandatory basis and be free of charge to health care workers
  - Should be administered to adult population
Instructional training

- To identify and vaccinate against pertussis among their patients.

- To protect themselves and their families.
Thank you
Keep well
and keep your selves healthy forever!!!!