Heart of the problem: Investigation of 3 bacterial endocarditis cases following oral surgery- New Jersey 2014

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Background

• Endocarditis- infection of the inner lining of the heart
• Bacteria enter the bloodstream and attach to areas of the heart
• The most common microbiologic causes of endocarditis are Staphylococcus spp and viridans group streptococci
• Risk factors- damaged heart valves, artificial heart valves, previous endocarditis
• Risk in the general population- one case of endocarditis per 14 million dental procedures

History of Cases

• Patient A, 69 years old
  • Procedure Date: 12/20/12
  • Extraction with bone graft, IV sedation
  • Outcome: required valve replacement

• Patient B, 17 years old
  • Procedure Date: 5/7/14
  • Wisdom tooth extraction, IV sedation
  • Outcome: required valve replacement

• Patient C, 23 years old
  • Procedure Date: 6/27/14
  • Wisdom tooth extraction, IV sedation
  • Outcome: required surgery
Private Practice Characteristics

- Oral surgeon practiced at two locations, all cases received treatment at same location
  - Staffing was the same at both locations
- Surgeon reported seeing 2-7 patients per day, up to 35 patients per week
- Performed procedures such as extractions, implants, bone grafting, impressions, and botox-restylane injections
- Cleaning, disinfection, and sterilization of instruments occur on-site

1st Site Visit, 11/14/14

- Participants:
  - Communicable Disease Service, Local Health Department, Division of Consumer Affairs Enforcement Bureau
- Findings:
  - Controlled substances stored in a locked cabinet within unlocked employee bathroom which housed a toilet, sink, and employee lockers
  - Single-dose vials of medication were used for more than one patient
  - Aseptic technique was not followed when accessing medication vials or starting the intravenous catheter
Follow up with Oral Surgeon and Board of Dentistry

- Preliminary report and recommendations made to surgeon
  - Discard any previously opened sterile instrument and medications
  - Hire an infection preventionist consultant
- Board of Dentistry and Deputy Attorney General (DAG) scheduled re-visit with oral infection control expert and oral surgeon consultant

2nd Site Visit, 01/13/15

- Participants:
  - Communicable Disease Service, Division of Consumer Affairs Enforcement Bureau, oral infection control expert, oral surgery consultant
- Findings:
  - Patient procedures were cancelled so actual patient care activities were not observed
  - Controlled substances relocated to a locked cabinet within the oral surgeon’s private office
  - Syringes/needles and intravenous solution bags were observed to be within their protective wrappers.
  - Prefilled syringes were not observed in the procedure rooms
  - The oral surgeon had not yet retained the services of an infection preventionist
  - Multidose vials of medication were stored and prepared for patients in the immediate patient care area.

Follow Up

- Communicable Disease Service sent another report to oral surgeon highlighting findings
  - Although practice was better, still a need for an infection preventionist consultant
- Board of Dentistry gave interim consent order for surgeon to comply (to date -have not received signed copy back)
- Surgeon still in practice today
Conclusions
• Close collaboration with Board of Dentisty and Office of the Attorney General important
• Difference between best practice and common practice
• Sterility issue when conducting procedures in the mouth
• Infection prevention expertise lacking in private practice settings

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THANK YOU!
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