

Reducing Surgical Site Infections: A Comparison of Surgical Skin Preparations

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RESEARCH QUESTION

- Which surgical site skin preparation solution yields a lower incidence of surgical site infection (SSI) postoperatively?

SIGNIFICANCE

- Most common type of infection in surgical clients
- The use of effective surgical skin preparations can drastically reduce the occurrence of such infections.
- Contribute to longer, costlier hospital stays
- More likely to spend time in an intensive care unit
- 5 times more likely to be readmitted
- Twice as likely to die

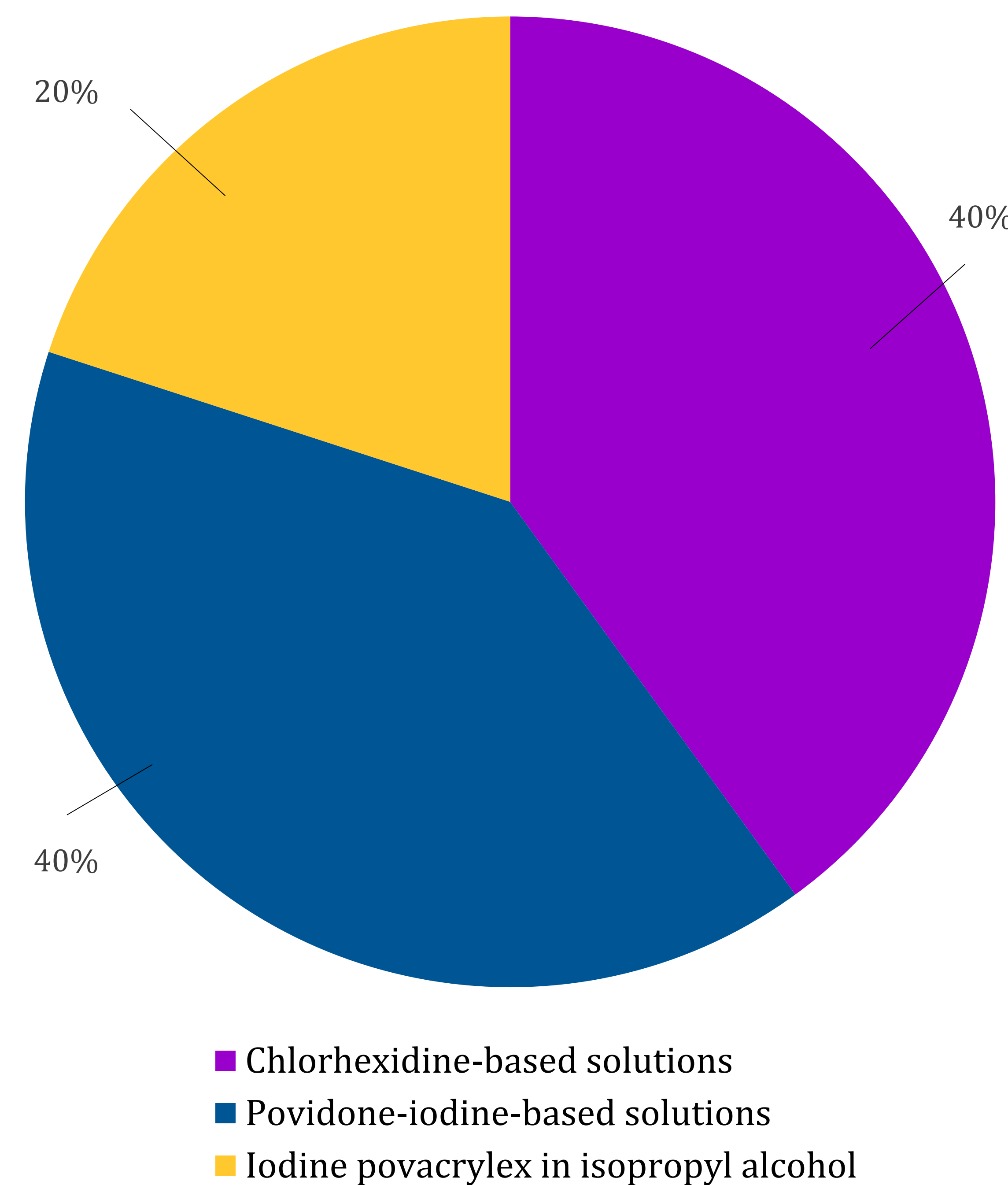
PURPOSE

- Explore literature pertinent to surgical skin preparations
- Examine how these preparations reduce surgical site infection postoperatively
- Seek to determine if one single preparation is most effective in infection reduction

SOLUTIONS EXAMINED

- Povidone-iodine solution (Betadine)
- Iodine povacrylex in isopropyl alcohol (DuraPrep)
- Parachloroxylenol (PCMX)
- Chlorhexidine gluconate (CHG)
- Povidone iodine with CHG
- CHG with isopropyl alcohol (ChloraPrep)
- Povidone-iodine with industrial methylated spirit

FINDINGS



RESULTS

- 2 studies found chlorhexidine-based solutions to be most effective at SSI reduction
- 2 studies found povidone-iodine-based solutions to be most effective
- 1 study found iodine povacrylex in isopropyl alcohol to be most effective

PRACTICE CHANGE

- Need for further research studies
- Comprehensive study examining all available solutions
- Studies examining surgeries of other wound classifications
- Studies examining surgeries of other organ systems
- Develop evidence-based practice guidelines

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