Student Research Week 2020

Congratulations to Award Winners from the School of Nursing!

1st Place: Ashley James, BSN, RN and Julie Vereen, BSN, RN
Title of Poster: Implantable Cardioverter Defibrillators: Their Impact on Quality of Life

2nd Place: Matt Ellis and Troy Faulkner
Title of Poster: Corneal Abrasion Management Guidelines

3rd Place: Elana Sherwood and Janelle Calloway
Title of Poster: Best Practice: Adolescent Substance Abuse Disorder

Thank you to all judges who participated: Cathy Lovett, Ann Hagstrom, Amy Boothe, and Patti White
Implantable Cardioverter Defibrillators: Their Impact on Quality of Life
Ashley James, BSN, RN and Julie Vereen, BSN, RN
Texas Tech University Health Sciences Center

Introduction

• The purpose of this research is to evaluate and appraise multiple studies with various levels of evidence to determine if an implantable cardioverter defibrillator (ICD) is as compared to medical treatment without an ICD (C) improve quality of life (QoL) in 6 months (?).

• Background Questions:
  - What are the recommendations needed to determine candidacy for an ICD?
  - How does an ICD impact QoL?
  - How does alternative medical treatment without an ICD improve QoL?

• Foreground Questions:
  - In older adults, how does an ICD compared to alternative medical therapies impact QoL?
  - In older adults with ischemic heart disease, what is the best approach to improve QoL?

• Our literature search identified four different studies to best answer the PICOT question: a randomized control trial (RCT) (Level II), a qualitative study (Level VI), a clinical practice guideline (Level VII), and a systematic review (Level I).

• Consistency

  - All four research studies discussed QoL for patients with an ICD, but not all compared or discussed alternative medical therapies.
  - A common theme or intervention compared QoL in patients receiving a shock to those who had not.
  - In the RCT, a web-based intervention was used to compare shock related anxiety in ICD patients and improve QoL as compared to usual care (Humphreys, Lowe, Rance, and Bennett, 2016).

  - The goal of the systematic review was to explore the QoL in patients with an ICD compared to those receiving medical treatment; however, ICDs provide survival advantage over medical treatment, and randomization allocation of implementation of an ICD and medical treatment may be unethical (Tomork, Koller, Zabel, Willich, and Renhold, 2015).

• The systematic review and clinical practice guidelines were consistent in concluding that there are no common trends or significant impacts of ICDs improving QoL.

Effectiveness

• Interventions for ICDs include: education on use of device, shock force, lifestyle modifications, physical appearance, and psychological support. These interventions can decrease anxiety and better prepare individuals who require an ICD.

• In the RCT, there was no overall significant difference in QoL scores in the intervention and control groups from a web-based intervention (Humphreys and Mert, 2017).

• In the qualitative study, all participants reported experiencing multiple losses leading to anxiety and depression from a cardiac arrhythmia resulting in an ICD (Humphreys, Lowe, Rance, and Bennett, 2016).

References


Corneal Abrasion Management Guidelines
Matt Ellis & Troy Faulkner
Texas Tech University Health Sciences Center

**Introduction**

Patching for corneal abrasions has been a treatment for decades. Is this practice outdated or is it patching still an effective treatment method for eye irritation?

**PICO Question**: In adults with corneal abrasions, does the use of an eye patch over the injured eye, along with antibiotic ointment, compared to using antibiotic ointment alone, decrease healing time? Does the use of an eye patch for corneal abrasion delay healing time?

**Background Question**: In adults with a corneal abrasion, what is the best nursing practice to treat this injury? Is using an eye patch for corneal abrasions still an effective method of treatment?

**Appraisal of the Evidence**

<table>
<thead>
<tr>
<th>Consistency</th>
<th>Effectiveness</th>
<th>Preferences and Values</th>
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| Consistency:  
- (Mangini, 2013)  
- No difference in patch and no patch groups  
- Treat according to patient needs and preferences  
- (Koistinen, 1998), (Lim, 2015), (Ross, 2017)  
- Recommend use of antibiotic ointment  
- Patch is a valid practice and may delay healing time  
- Recommendations consistent across all four studies  
- All four studies suggested patching is inadequate current practice  
- No contradictions identified | Results & Findings:  
- Level of evidence adequate for practice adjustments  
- Eye Patch + Antibiotic  
- No increased benefit of patching  
- Patching increases risk for infection  
- Increase corneal temperature  
- Delay healing process  
- Decrease corneal oxygenation  
- Antibiotic Only  
- Healing time decreased  
- Antibiotic compliance increased  
- Easy access to eye  
- Patient comfort increased | (Koistinen, 1998), (Lim, 2015), (Ross, 2017)  
- Studies implied patient comfort as directive for treatment  
- Patients prefer no patch  
- Easy access to eye  
- No macular nerve complications  
- Social stigma concerns with patch  
- Patients compliant with patch  
- Patients complain of foreign body sensation  
- 33 percent of 103 removed patches due to discomfort or increased complications  
- (Mangini, 2013)  
- Eye patch use dependent on needs & preferences of the patient  
- Protects injured eye from airborne foreign bodies and sunlight exposure |

**Recommendations for Best Nursing Practice**

- Avoid patching eye  
- NSAID drops for analgesia not recommended  
- Bandage contact lens for pain control  
- Ophthalmology consent recommended for deep abrasion, severe vision syndrome, or signs of infection  
- Good antibiotic stewardship  
- Prophylactic 2nd gen. fluoroquinolone topical antibiotic recommended for non-contact wearers  
- 4th gen. fluoroquinolone drops for contact wearers  
- Patient education  
- Seek medical attention if symptoms persist for more than three days/increased drainage, vision loss, pain out of proportion to injury, or signs of worsening condition  
- Use extra caution when driving vehicle or operating machinery  
- Avoid scratching or touching the eye and contact lenses until prescribed by physician  
- Utilize eye protection glasses as necessary  
- May have decreased depth perception  
- Administer prescribed medicines as directed

**References**

3rd Place Winners:

**Best Practice: Adolescent Substance Abuse Disorder**

Elana Sherwood and Janelle Calloway  
Texas Tech University Health Sciences Center

**Introduction**

**PICOT**  
In adolescents with substance abuse disorders (SAD), nurse-led nursing interventions such as counseling and active listening (I) compared to daily medication administration (C) affect behavior (O) over a 12 week period (T)

**Background**  
- What defines substance abuse in adolescents?  
- What are the clinical manifestations of substance abuse?  
- How much use of a substance classifies an abuse disorder?  
- What current screening approaches are being used?  
- Foreground  
- What is the best approach in prediction of substance abuse in adolescents?  
- Is psychiatric treatment and parent involvement more effective than medication administration in the treatment of substance abuse disorders in adolescents?

**Effectiveness**

**Innovation**  
- 12-Step Facilitation (TSF) handbook program designed to reverse daily habits of substance and exercise abstinence  
- Parenting interventions (counseling, playgroup, communication, and support of youth participation)

**Conclusion**  
- CT and TSF patients report significantly fewer relapses and improved quality of life compared to control group

- The combined approach of counseling and education provides a comprehensive intervention for substance abuse disorder

- TSF program provides a solid foundation for building confidence in self-change

**Recommendations for Best Nursing Practice**

- Counseling should be a priority for adolescents suffering from substance abuse because prolonged counseling therapy has been shown to reduce incidence of substance abuse relapse.
- Counseling includes cognitive-behavior therapy, 12-step, ACHESS, and parenting interventions.
- Pharmacological therapies are indicated in situations of withdrawal.

**References**


**Appraisal of the Evidence**

**Consistency**

The research methods all involved testing a counseling therapy (12-Step, ACHESS) and parenting intervention (12-Step, ACHESS), and improving abstinence from substance abuse. The goal of this study was to determine an intervention to achieve abstinence from substance abuse. The interventions are consistent across the studies. The specific counseling interventions being tested (12-Step, ACHESS) are all consistent with and effective parenting intervention, Cognitive Behavior Therapy).

**Conclusions**

Counseling suggests that interventions involving counseling are effective at reducing rates of substance abuse in adolescents.

The guideline points out that the use of pharmacological interventions has not been thoroughly tested in adolescents and counseling should be priority.