OPTIMAL PERIOPERATIVE MANAGEMENT OF THE GERIATRIC PATIENT:

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GERIATRICS for SPECIALISTS
A multi-specialty effort to advance quality and safety for the older patient.
An Initiative of the American Geriatrics Society

Programação

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3. Manejo Medicações
4. Analgesia
5. Delirium
6. Complicações pulmonares
7. Declínio Funcional
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1. Antibiótico profilático

- A relação entre uso adequado de antibiótico profilático e redução do risco de infecção em sítio cirurgico é bem estabelecida
- Idosos: atenção à função renal e ajuste de doses
- Escolha: tipo procedimento, fatores de risco, flora do hospital
- HVC: Cefazolina (Kefazol)

1. Antibiótico ITU

- ITU fator comum relacionado à quedas em idosos
- Pacientes de alto risco para desenvolver bacteremia:
  - Transplantados
  - Neutropênicos
  - Gestantes
  - Pré-op cirurgia urológica
  - Pré-op de colocação de prótese

1. Antibiótico ITU

- Há benefício em atrasar a cirurgia?

• Benefícios da cirurgia precoce:
  - ✓ redução morbimortalidade
  - ✓ redução declínio funcional
  - ✓ redução complicações

Decisão caso a caso

• Riscos:
  - ✓infecção de sítio cirúrgico
  - ✓bacteremia e infecção de prótese

SHOULD PREOPERATIVE URINARY TRACT INFECTION IN PATIENTS WITH HIP FRACTURES DEALY SURGERY?

R. Yassa, K. Veravalli, A. Evans
Published 14 March 2013

2. Profilaxia TEV

RISK FACTORS FOR VTE[27,28]
Hypercoagulability
Congenital hypercoagulability
Cancer
Cancer therapy
History of VTE
Inflammatory bowel disease
Oral contraceptives
Polycythemia
Pregnancy
Smoking
Thrombocytosis
Venous Stasis
Congestive heart failure
Immobility
Increasing age
Obesity
Varicose veins
Venous compression/obstruction
Endothelial Injury
Recent surgery
Severe infection
Trauma

Idade confere risco adicional !

Appendix II. Older Adult Patient Groups at High Risk for VTE

VTE PROPHYLAXIS IN HIGH RISK GROUPS*		
Patient Group	**Recommended Regimen**	**Notes**
Orthopaedic patients: total hip or knee arthroplasty	LMWH (starting either 12 h or more preoperatively or 12 h or more postoperatively) for a minimum of 10-14 days and up to 35 days	Alternatives: LDUH, fondaparinux, apixaban, dabigatran, rivaroxaban, VKA, ASA, or an IPC device if high bleeding risk
Orthopaedic patients: hip fracture	LMWH (starting either 12 h or more preoperatively or 12 h or more postoperatively) for a minimum of 10-14 days and up to 35 days	Alternatives: LDUH, fondaparinux, apixaban, dabigatran, rivaroxaban, VKA, ASA, or an IPC device
Nonorthopaedic surgery‡	LMWH or LDUH AND mechanical prophylaxis with IPC	Alternatives: low dose ASA, fondaparinux
Cancer	Extended-duration LMWH (4 weeks) after hospital discharge	
Craniotomy/spinal surgery	IPC	LMWH or LDUH once adequate hemostastis established and risk of bleeding decreased
Cardiac surgery	IPC	LMWH or LDUH if length of stay prolonged due to nonhemorrhagic surgical complications
Major trauma and spinal cord injury	LDUH/LMWH and IPC if not contraindicated due to bleeding risk or lower extremity injury	

VTE, venous thromboembolism; LMWH, low-molecular weight heparin; LDUH, low-dose unfractionated heparin; VKA, vitamin K antagonist; ASA, aspirin; IPC, intermittent pneumatic compression
*Based on the Caprini score, age>60, major open or laparoscopic surgery>45 minutes, malignancy, craniotomy, major trauma, and orthopaedic surgery confer a minimum of moderate risk of VTE automatically;
‡This includes general, abdomino-pelvic, bariatric, vascular, plastic/reconstructive, and thoracic surgery

3. Manejo medicações

- Lista completa das medicações de uso habitual
- Medicações não essenciais devem ser descontinuadas
- Avaliar:
  - Risco de progressão da doença com a suspensão
  - Potencial de interação medicamentosa com agentes anestésicos

4. Analgesia

- Idosos são sensíveis a ação dos opióides
  - Usar na menor dose possível
  - Podem desencadear delirium
  - Maior risco de alteração hemodinâmica e respiratória relacionadas à classe
  - Atenção à constipação
    - Lactulona, bisacodil
    - NÃO usar óleo mineral

4. Analgesia

- Evitar:
  - Benzodiazepínicos
  - Meperidina
  - Relaxante muscular
  - AINE

5. Delirium

- Estado confusional agudo
- Complicação pós op. mais comum (9-44%)
- Relacionado à:
  - Aumento tempo internação
  - Morbimortalidade
  - UPP
  - BCP aspirativa
  - Declínio funcional

5. Delirium

Para o diagnóstico de delirium, é necessária a presença dos critérios A e B mais a presença do critério C ou do critério D, formando A+B+C ou A+B+D.

Critério A. Início agudo e curso flutuante: MARQUEI O CÍRCULO NA PERGUNTA 1 **OU** ALGUM QUADRADO NAS PERGUNTAS 2, 3 OU 4?	Sim( ) Não( )
Critério B. Falta de atenção: MARQUEI ALGUM CÍRCULO NA PERGUNTA 2?	Sim( ) Não( )
Critério C. Pensamento desorganizado: MARQUEI ALGUM CÍRCULO NA PERGUNTA 3?	Sim( ) Não( )
Critério D. Alteração do nível de consciência: MARQUEI ALGUM CÍRCULO NA PERGUNTA 4?	Sim( ) Não( )

5. Delirium

HOSPITAL VERA CRUZ CAMPINAS

Appendix IV. Perioperative Risk Factors for Delirium

PREOPERATIVE RISK FACTORS[5,101,102,109,111,112]	INTRAOPERATIVE AND POSTOPERATIVE RISK FACTORS[105,111]
• Age greater than 65 • Visual or hearing impairment • Preexisting cognitive impairment • Severe illness (for example, ICU admission) • Presence of infection • Depression • Alcohol abuse • Current hip fracture • Renal insufficiency • Anemia • Poor nutrition • Poor functional status • Limited mobility • Unintentional injury (for example, falls) • Polypharmacy • Aortic procedures • Frailty	• Infection • Surgical stress • Cardiopulmonary complications • Procedure complications • Inadequately controlled pain • Sleep deprivation • Hospital-acquired conditions • Medication toxicity/sensitivity • New pressure ulcers • Malnutrition • Use of physical restraints • >3 medications added • Inappropriate medications (for example, Beers criteria medications) • Use of bladder catheters

5. Delirium

- Fatores precipitantes no PO:

Dor
Hipóxia
Complicação pulmonar
Infecção
Dist. hidroeletrolíticos

Retenção Urinária
Impactação fecal
Reação adversa a medicamentos
Hipoglicemia
Invasões (CVC, SVD)

5. Delirium

TREATING DELIRIUM[99,108]		
Patient	**First Line Therapy**	
All delirious elderly patients	Multicomponent nonpharmacologic interventions	1. Frequent reorientation with voice, calendars and clocks 2. Calm environment 3. Eliminating restraint use 4. Familiar objects in the room 5. Ensuring use of assistive devices (glasses, hearing aids)
	Second Line Therapy	
Agitated, delirious elderly patients threatening substantial harm to self and/or others, if behavioral measures have failed or are not feasible	Antipsychotic medications at lowest effective dose	1. Haloperidol starting at 0.5-1 mg PO/IM/IV (IV route not recommended due to increased risk of prolonged QT interval) Reevaluate in 15 min-1 hr and double dose if ineffective Increased risk of prolonged QT interval when dose exceeds 35 mg per day 2. The following can also be used: a. Risperidone b. Olanzapine c. Quetiapine d. Ziprasidone
Adapted from Clinical Practice Guideline for Postoperative Delirium in Older Adults, *J Am Geriatr Soc*, 2014.		

6. Complicações pulmonares

POSTOPERATIVE STRATEGIES TO PREVENT PULMONARY COMPLICATIONS[86,130]

• Aspiration precautions:
  • Bedside evaluation of any patient with symptoms, signs or history of dysphagia (see Section III.D)
  • Instrumental swallow evaluation in select patients
  • Potential indications: signs/symptoms inconsistent with examination, nutritional or pulmonary compromise with possible dysphagic-related etiology, concern for safety and efficiency of swallowing, high risk diagnosis (for example, neurologic or gastrointestinal pathology), change in swallow function suspected)
  • Head of bed elevation at all times with repositioning
  • Getting out of bed for all meals when possible
  • Sitting upright while eating and for 1 hour after completing

• Use of incentive spirometer and chest physical therapy • Use of deep breathing exercises • Epidural analgesia
Partially adapted from *ACS NSQIP Best Practices Guideline: Prevention of Postoperative Pulmonary Complications*

7. Declínio funcional

RISK FACTORS FOR FUNCTIONAL DECLINE[153]
• Advanced age
• Frailty
• Cognitive Impairment
• Poor mobility or functional impairment
• Depression
• Low social functioning
• Presence of other geriatric syndromes (falls, incontinence, pressure ulcers)

INTERVENTIONS FOR PREVENTING FUNCTIONAL DECLINE[5,154,155,120,121]
Care models (Appendix VII)
• Hospital Elderly Life Program
• Acute Care for Elderly units[156,157]
• Nurses Improving Care of Health System Elders (NICHE)
Structural characteristics
• Handrails
• Uncluttered hallways
• Large clocks
• Large calendars
Staffing
• Nursing staff education
• Daily multidisciplinary rounds
Patient-based
• Promotion of family participation in care
• Early mobilization
• Early physical/occupational therapy referral
• Geriatric consultation
• Comprehensive discharge planning
• Nutritional support

8. Quedas / Úlcera por pressão

PRESSURE ULCER RISK FACTORS[160,161,169-172]

- Abnormal positioning due to spasticity or contracture
- Advanced age
- Chronic moisture
- Edema
- High co-morbidity burden (cardiovascular, neurological, or orthopaedic disease)
- Immunoincompetence
- Incontinence
- Infection
- Limited mobility
- Loss of sensation
- Shearing forces
- Skin fragility
- Unrelieved pressure

Postoperative Rounding Checklist

Daily Evaluation For	Prevention/Management Strategies
☐ Delirium/cognitive impairment	• Pain control • Optimize physical environment (for example, sleep hygeine, sleep protocol, minimize tethers, encourage family at bedside) • Vision and hearing aids accessible • Remove catheters • Monitor for substance withdrawal syndromes • Minimize psychoactive medications • Avoid potentially inappropriate medications (for example, Beers criteria medications)
☐ Perioperative acute pain*	• Ongoing education regarding safe and effective use of institutional treatment options • Directed pain history • Multimodal, individualized pain control • Vigilant dose titration
☐ Pulmonary complications	• Chest physiotherapy and incentive spirometry • Early mobilization/ambulation • Aspiration precautions
☐ Fall risk	• Universal fall precautions • Vision and hearing aids accessible • Scheduled toileting • Appropriate treatment of delirium • Early mobilization/ambulation • Early physical/occupational therapy if indicated • Assistive walking devices
☐ Ability to maintain adequate nutrition	• Resume diet as early as feasible • Dentures made available • Supplementation if indicated
☐ Functional decline	• Care models and pathways • Structural: uncluttered hallways, large clocks and calendars • Multidisciplinary rounds • Early mobilization and/or PT/OT • Family participation • Nutritional support • Minimize patient tethers
☐ Pressure ulcers	• Reduce/minimize pressure, friction, humidity, shear force • Maintain adequate nutrition • Wound care

*See Section II.B in these guidelines and the ASA Practice Guideline for Acute Pain Management in the Perioperative Setting.[59]

Conclusão:

- ✓ Quanto mais precoce a cirurgia, melhores os desfechos
- ✓ Atenção aos detalhes:
  - ❖ escolha das medicações
  - ❖ delirium
  - ❖ controle de dor
  - ❖ hidratação / evacuação
- ✓ essencial participação equipe multidisciplinar
  - ❖ Prevenção e tto delirium, prevenção UPP, declínio funcional, mobilização precoce