QUALITY MANAGEMENT IN SURGICAL DISCIPLINES

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ABSTRACT

Clinical protocols and the related clinical indicators of quality and performance are expressions of Evidence-based Medicine. They act as medical as well as managerial tools whose aim is to provide the best possible health care at the least possible cost, taking into account the means available in each circumstance. Herein we present two of the protocols used in our institutions, regarding lung tissue resection for lung cancer and inguinal hernia plastic surgery.

Key Words: quality management, clinical protocols, clinical indicators of quality, surgical disciplines
INTRODUCTION

In continuation to our previous article regarding the significance of clinical protocols in surgical disciplines, we would like to present the next two of our protocols, designed after meticulous study of the related literature and after the evaluation of worldwide experts' opinion on the subject. We would like to emphasize again the fact that, clinical protocols act both as a medical as well as a managerial tool, aiming at the improvement of clinical services provided to our patients, with the application of the means available each time at the least possible cost. The rationale behind is that since health treatments have a cost and resources are limited, the integration of managerial and financial efficiency within clinical efficiency is crucial. As Bachtsevani et al. put it, “it seems the use of evidence-based guidelines can improve outcomes in relation to organizations in the sense of decreased admission rates, length of stay, and less resource utilization, which reduces costs.” Such monitoring mechanisms intend to evaluate, reassess and improve the clinical care not only in terms of outcomes but also in financial terms for the benefit of the patient welfare, and the hospital as an organization denoting in this way the significance of evidence-based medicine. Evidence has also shown that “the greater the strength of the evidence incorporated, the greater the quality of the guideline and the greater its potential to maximize the use of resources and improve quality of healthcare.”

CLINICAL PROTOCOL OF LUNG TISSUE RESECTION

Responsible staff: S-member of the surgical team, A-anesthesiologist, DN-department nurse, AN-anesthesiology nurse, SN-surgical ward nurse, Phys-physical therapist

Preoperative phase

- Is adequate laboratory control available?
  (Blood count, biochemical control, EKG, chest X ray, bronchoscopy, biopsies, brain CT, Abdomen CT, bones scan) S

- Is signed informed consent available? S

- Check for the procedure indication S

- Antiplatelet antithrombotic drug interruption S

- Control for allergies S

- Patient preparation: enema, bath, shaving S, DN

- Is the patient diabetic? Remedy adjustment S
- Are there any other comorbidities (e.g., thyroid disease); Remedy adjustment, consultation

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**Operation Day**

- Patient identity check **S, DN, AN, SN**

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- Confirmation of the kind of procedure **S, A**

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- Removal of false teeth, rings, other metal objects **DN, AN**

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- Blood units availability check **S/A**

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- Special care augmented alert for cases with difficult intubation **A**

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**Postoperative phase**

- Is the patient suitable for fast track extubation **S/A**

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- Continuous monitoring, regulation of fluid electrolytes balance—regulation of antibiotic and analgesic treatment—augmented clinical suspicion for postoperative bleeding **S, Phys**

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- 1st postoperative day, transport to the ward, removal of urine catheter **S** patient should sit and stand, respiratory gymnastics **S, Phys**

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- Initiation of treatment with low molecular weight heparin, initiation of treatment with antiplatelet drugs (Salospir-Clopidogrel), if indicated. —oral adjustment of drugs

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- 2nd – 4th postoperative day mobilization and chest tube removal

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- 2nd-4th postoperative day- removal of central venous catheter

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- 3rd -7th postoperative day- discharge according to the range of tissue excision (wedge resection, lobectomy, pneumonectomy)

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Complications-Special Remarks

CLINICAL INDICATORS

30 days mortality, hospitalization duration, readmission rate, reoperation rate

CLINICAL PROTOCOL OF INGUINAL HERNIA PLASTIC OPERATION

Responsible staff: S-member of the surgical team, A-anesthesiologist, DN-department nurse, AN-anesthesiology nurse, SN-surgical ward nurse, Phys-physical therapist

Preoperative phase

- Is adequate laboratory control available?
  (Blood count, biochemical control, EKG, chest X-ray)

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- Is signed informed consent available

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- Check for the procedure indication

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- Antiplatelet antithrombotic drug interruption

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- Control for allergies
- Patient preparation: enema, bath, shaving S, DN

- Is the patient diabetic? Remedy adjustment S

- Are there any other comorbidities? (e.g. thyroid disease); Remedy adjustment, consultation S

- Is mesh graft available? S

Patient identity check S, DN, AN, SN

- Confirmation of the kind and side of procedure S, A

- Removal of false teeth, rings, other metal objects DN, AN

- Blood products availability check S, A

- Special care and augmented alert for cases with difficult intubation A

Postoperative phase

- Immediate extubation, transfer to the ward A, S
- Operation day, Regulation of antibiotic and analgesic treatment, mobilization S, Phys

- Initiation of treatment with low molecular weight heparin, initiation of treatment with antiplatelet drugs, adjustment of other regimens S

- Day of the operation or postoperative day 1 Control of the surgical wound, removal of drainage, discharge S

Complications-Special Remarks

CLINICAL INDICATORS
30 days mortality, hospitalization duration, readmission rate, reoperation rate

ACKNOWLEDGEMENTS: None

REFERENCES


15. Machikanti L, Evidence-Based Medicine, Systematic Reviews, and Guidelines in Interventional Pain Management, Part I: Introduction and General Considerations

