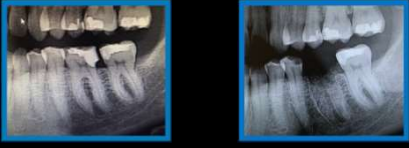


ACADEMY of GENERAL DENTISTRY AGD2021 THE PREMIER MEETING FOR GENERAL DENTISTRY AUSTIN, TEXAS JUNE 9 - 12 AGD2021.ORG

Principles of Surgical Extractions
Dental Surgical Pre-Operative Work-up and Treatment Planning



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June 6, 2021
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Dental Surgical Pre-Operative Work-up and Treatment Planning

The Course Outline

Pre-Operative Work-Up
Dental Surgical Treatment Plan
Post-Op Instructions
Surgical Complications

Disclaimer:
ADA CERP Standard IX

“Participants should be cautioned about the potential risks of using limited knowledge when integrating new techniques in their practice”

Dental Surgical Pre-Operative Work-up and Treatment Planning

Pre-Operative Work-Up


Medical History Review

- 1) Medical History Form
- 2) Physician Consultation Form
- 3) Patient Selection

Dental Surgical Pre-Operative Work-up and Treatment Planning

Pre-Operative Work-Up

Medical History Review




Immunosuppression
Bleeding/Clotting
Bisphosphates
Mental Assessment
Others????

Dental Surgical Pre-Operative Work-up and Treatment Planning

Pre-Operative Work-Up

Physician Consultation Form



Dental Surgical Pre-Operative Work-up and Treatment Planning

Pre-Operative Work-Up

Patient Selection



Do We Go or Do We Stop

Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Section Outline

- Coordination with Overall Treatment
- Radiographic Examination
- Consent
- Risk Management
- Anesthesia (Anxiety & Pain Control)

Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Coordination with Overall Treatment


Surgery First

- Reduce Sources of Pain and Infection
- Allow for Time to Heal Prior to Restorative work

Air Driven Handpieces
Can Cause Air Emphysema

Diagnosis

100%=




Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Radiographic Examination

Less Than 1 Year Old



think3D
PA vs Pano vs CBCT

Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

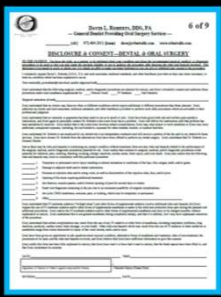
Consent Topics To Address

- Nerve Injury
- Retained Root Tips
- Infection
- Damage to Adjacent Teeth
- Jaw Fracture
- Perforation of Maxillary Sinus
- Pain
- Anesthesia Choices

Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan


Surgical Consent Form



Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Nerve Injury Disclosure



Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Risk Management

The Games We Play

Moral/Ethical

Scientific/Dental

Legal/Malpractice

Regulatory/Board

Political/Legislative

Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Risk Management

The Games We Play

Moral/Ethical

Scientific/Dental

Legal/Malpractice

Regulatory/Board

Political/Legislative



Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Risk Management
The Games We Play

Moral/Ethical
Scientific/Dental
Legal/Malpractice
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Political/Legislative



Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Risk Management
The Games We Play

Moral/Ethical
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Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Risk Management
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Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Risk Management

The Games We Play

Moral/Ethical
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Dental Surgical Pre-Operative Work-up and Treatment Planning

Dental Surgical Treatment Plan

Anxiety Management Options

- Address Patient Fears
- Use Anti-Anxiety Techniques
 - a) Nitrous Oxide
 - b) Enteral (oral) Sedation
 - c) Parenteral (IV) Sedation
 - d) Dentist Anesthesiologist

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Section Outline

- Prescriptions
- Irrigation Protocols
- Written Post-Op Instructions
- Post-Op Video Instructions
- Normal Pain and Swelling

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions

Antibiotic prescriptions are unnecessary after LTMR when preoperative infections are absent
(Oral Surg Oral Med Oral Pathol Oral Radiol 2012;114(suppl 6):S199-S208)

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions

Medrol Dosepak

VS

Dexamethasone

Methylprednisolone and dexamethasone are the suggested drugs that effectively decrease pain after 3rd molar surgery. The intramuscular and intravenous routes are the most effective. Preoperative corticosteroids provide maximum benefit
J Dent Anesth Pain Med 2020 October; 20(5): 281-291

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions

Medrol Dosepak VS Dexamethasone

Corticosteroid Conversion Chart

Glucocorticoid	Approximate Equivalent Dose (mg)	Relative Anti-Inflammatory (Glucocorticoid) Potency	Relative Mineralocorticoid (Salt Retaining) Potency	Biological Half-Life (Hours)
Short-Acting				
Cortisone	25	0.8	0.8	8 - 12
Hydrocortisone	20	1.0	1.0	8 - 12
Intermediate-Acting				
Methylprednisolone ★	4	5	0.5	18 - 36
Prednisolone	5	4	0.8	18 - 36
Prednisone	5	4	0.8	18 - 36
Long-Acting				
Dexamethasone ★	0.75	25	0.0	36 - 54

Mekie AW et al. Potency and Duration of Action of Glucocorticoids. AM J of Med. 1977. 63 (2):200 - 207. PMID: 888843

Dexamethasone is a well-established antiemetic

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions



*For pain:**

Take 2 Advil (or 1 Aleve), plus 1 Tylenol every 4 hours, around-the-clock for 3-4 days. (*Prescription pain medication is available but should only be used on a limited basis.)

DDS

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions

Alternatives to Opioid Analgesics in Dental Practice

For optimal pain relief, the combination of 200-400 mg ibuprofen with 500-1,000 mg acetaminophen has been shown to provide pain relief that is superior to virtually all acetaminophen/opioid combinations

Arthur H. Jeske, DMD PhD


The results of the quantitative systematic reviews indicated that the ibuprofen-APAP combination may be a more effective analgesic, with fewer untoward effects, than are many of the currently available opioid containing formulations.

JADA 144(8) <http://jada.ada.org> August 2013

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Prescriptions



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REFILL _____ TIMES

PRODUCT SELECTION PERMITTED DISPENSE AS WRITTEN

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Irrigation Protocols

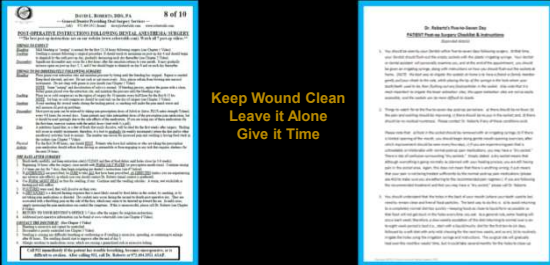


5-7 Days Routine
More Frequently if
a) Difficult Extraction
b) Anticipate Poor Pt Compliance

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Written Post-Op Instructions



**Keep Wound Clean
Leave it Alone
Give it Time**

Quality Post-Op Instructions Are as Important as a Quality Surgery

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Post-Op Video Instructions

Section 1

www.robertsdds.com

Dental Surgical Pre-Operative Work-up and Treatment Planning

Post-Op Instructions

Normal Pain and Swelling

Normal Daily Progression of Pain & Swelling Following Surgery

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Section Outline

- Infection vs Dry Socket
- Retain Roots / Coronectomy
- Facial Artery Injury
- Perforation of Maxillary Sinus
- Osteomyelitis /Jaw Fracture
- Nerve Injury

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Infection vs Dry Socket

Understanding the Dry Socket MYTH (what they are not)

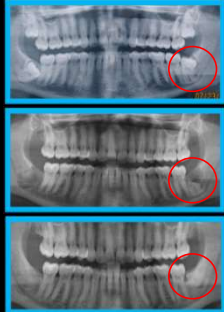
- Pain from food impaction
- Pain from underdosing pain meds
- Pain from smoking
- Pain from unrealistic expectations
- Pain from infection
- Pain from blood clot falling out
- Diagnosis by Exclusion



Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Retained Roots - Coronectomy



Pre-Op

Post-Op

2 Year PO

Dental Surgical Pre-Operative Work-up and Treatment Planning

Radiographic Examination

Retained Roots - Coronectomy

Patient Understanding Is Key


Discuss possible risks and complications and make sure the patient understands completely

Utilize an informed consent which is customized for this procedure

Will require multiple follow-ups

- 1 - month
- 3 - month
- 6 - month
- 12 - month

and every 12 months until stable

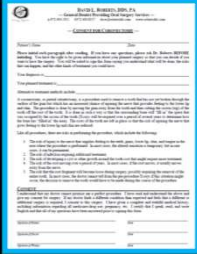


Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Retained Roots - Coronectomy

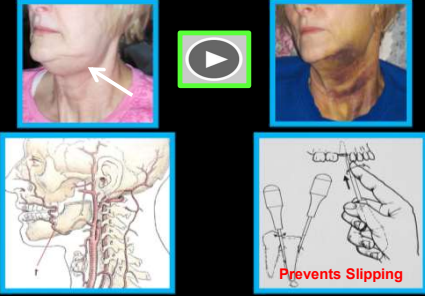
Coronectomy Consent



Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Facial Artery Injury



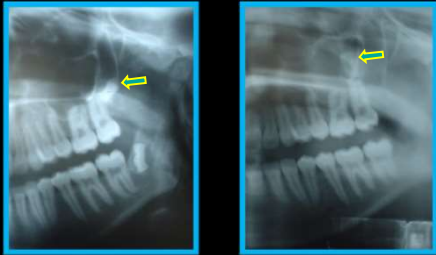
Slipped Instrument Into Mucobuccal Fold

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Perforation of Maxillary Sinus

Tooth or Tooth Root in Sinus




14 y.o. Female

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Perforation of Maxillary Sinus

Tooth or Tooth Root in Sinus



The Maxillary sinus cavity during Dental Surgery

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Perforation of Maxillary Sinus

Oroantral Communication

2mm or less- No Treatment Plus Sinus Precautions

2-6mm - Place Gelfoam or Collagen Plug with Suture

7mm or larger - Surgical Closure with Buccal Flap

Refer to OMFS if Persists More Than 2 Weeks

Contemporary Oral and Maxillofacial Surgery 6th Edition : Hupp 182-183

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Perforation of Maxillary Sinus

Oroantral Communication

Sinus Precautions

Decrease Pressure Changes


No Smoking

Antibiotics 5-7 days Amoxicillin or Clindamycin

Recommend a Oral Nasal Decongestant

Follow-up Every Week or 2 Until Closed

Refer to OMFS if Persists More Than 2 Weeks



Dental Surgical Pre-Operative Work-up and Treatment Planning


Surgical Complications

Perforation of Maxillary Sinus

Oroantral Fistula

Oroantral fistula is characterized by formation of epithelized tract between maxillary sinus and oral cavity

- When chronic Oroantral fistula Defects are wider Than 5mm and persist For more than 3 weeks A secondary surgical Intervention is required
 - buccal flap
 - palatal flap



Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Osteomyelitis /Jaw Fracture

Osteomyelitis Prevention

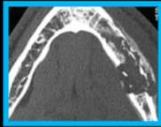


Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Osteomyelitis /Jaw Fracture

Risk Factors for Osteomyelitis

Older Patients		Crack Heard
Smoker		Immunocompromised
Food Debris		Diabetes
Deep Impaction		Long Term steroids

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Osteomyelitis /Jaw Fracture

Enhanced Follow-Up Guidelines For at Risk Patients


- Review Irrigation Protocols with Patient
- 2-3 Post-Op Irrigation Appointments
- Review Diet Restrictions with Patient
- Never go 1 Week without a New Pano or CBCT
- Stay in touch with Pt via Email and Phone
- ABX : Penn/(Flagyl) - Cleocin - Augmentin

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Nerve Injury

Inferior Alveolar Nerve Exposed



Reducing, Recognizing and Responding to Post Op Complications

Surgical Complications

Nerve Injury

Lingual Nerve Anatomy





Horizontal Distance from Lingual Plate 0-3 mm
 62 % in Contact with Lingual Plate

Vertical Distance from Alveolar Crest 2-mm above to 7-mm below
 17.5 % at or Above the Alveolar Crest

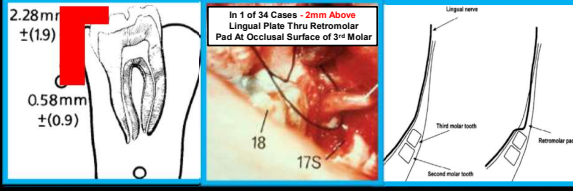
JOMS 42:565-567 1984

Reducing, Recognizing and Responding to Post Op Complications

Surgical Complications

Nerve Injury

Lingual Nerve Anatomy



2.28mm ±(1.9)
0.58mm ±(0.9)

In 1 of 34 Cases - 2mm Above Lingual Plate Thru Retromolar Pad At Occlusal Surface of 3rd Molar

18
17S

Lingual nerve
Third molar tooth
Second molar tooth
Retromolar pad

Horizontal Distance from Lingual Plate 0-3 mm
62 % in Contact with Lingual Plate
Vertical Distance from Alveolar Crest 2-mm above to 7-mm below
17.5 % at or Above the Alveolar Crest


JOMS 42:565-567 1984

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Nerve Injury

Lingual Nerve Anatomy



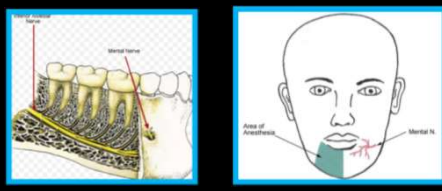
Lingual nerve
Third molar tooth
Second molar tooth
Retromolar pad

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Nerve Injury

Mental Nerve Anatomy



The mental nerve divides into 3 branches One branch supplies the skin of the chin and the other 2 innervate the skin and mucous membrane of the lower lip

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Nerve Injury Prognosis and Recovery

Inferior Alveolar Nerve Damage

Recovery of nerve damage	Lingual nerve damage	IAN damage
80 % ≤ x ≤ 100 %	6 cases (54.5 %)	15 cases (46.8 %)
60 % ≤ x < 80 %	2 cases (18.2 %)	3 cases (9.4 %)
40 % ≤ x < 60 %	0 case (0 %)	6 cases (18.8 %)
x < 40 %	1 case (9.1 %)	0 case (0 %)
No visit	2 cases (18.2 %)	8 cases (25 %)
Total	11 cases (100 %)	32 cases (100 %)

Permanent Damage is Very Rare

Dental Surgical Pre-Operative Work-up and Treatment Planning

Surgical Complications

Nerve Injury

When is the Right Time to Referral


- 1) Witnessed Injury - Immediately
- 2) Unwitnessed Injury - Before 3 months

- a) How Long Ago Was the Surgery
- b) Is It Complete or Partial Numbness
- c) Have You Had Any Improvement Over Time


Principles of Surgical Extractions

Dental Surgical Pre-Operative Work-up and Treatment Planning

Questions ?



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