

Chronic pain patients and perioperative management

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Postoperative pain kills patients

- More cardiac complications

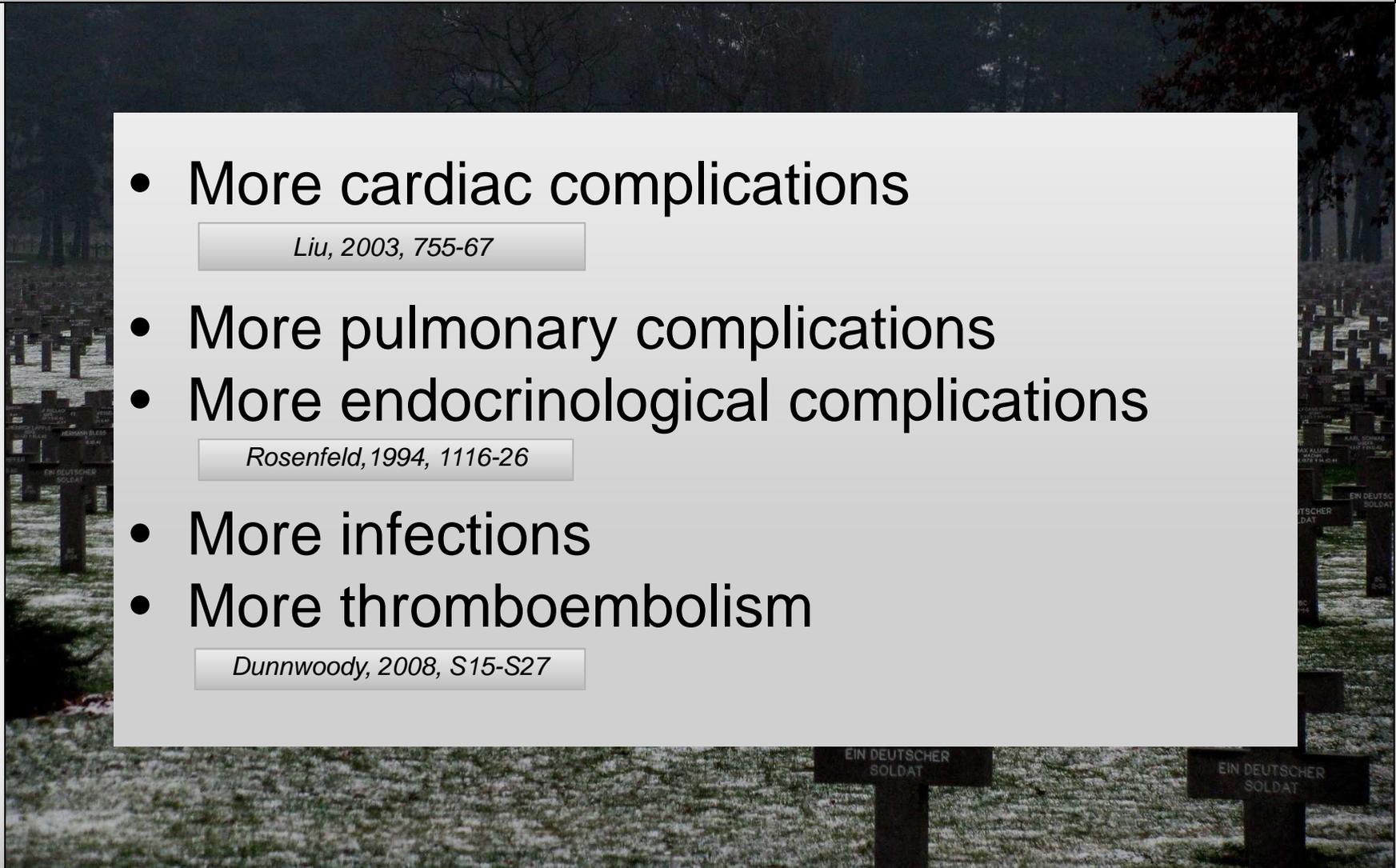
Liu, 2003, 755-67

- More pulmonary complications
- More endocrinological complications

Rosenfeld, 1994, 1116-26

- More infections
- More thromboembolism

Dunnwoody, 2008, S15-S27



Postoperative chronic pain

Surgical procedure	Prevalence of chronic pain
Cesarean section	6 %
Inguinal hernia repair	12 %
Vasectomy	15%
Laparoscopic cholecystectomy	23%
Hysterectomy	32%
Colectomy	28%
Sternotomy	32%
Radical prostatectomy	32%
Thoracotomy	50 %
Mastectomy & axillary node surgery	50 %
Lower extremity amputation	Stump pain 62%, Phantom pain 70%

Chronic pain

Acute pain



Overview

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graph LR; Overview[Overview] --- Introduction[Introduction]; Overview --- Opioids[Opioids]; Overview --- Antidepressants[Antidepressants]; Overview --- Anticonvulsants[Anticonvulsants];
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Introduction

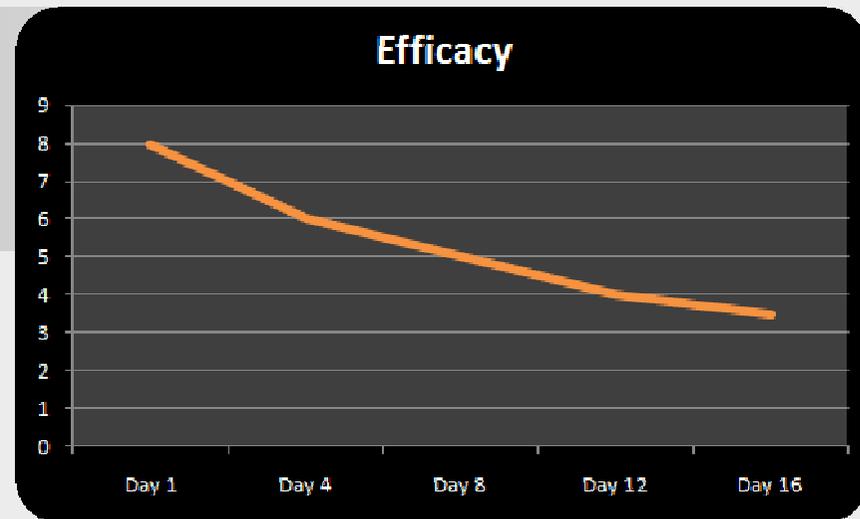
Opioids

Antidepressants

Anticonvulsants



Tolerance



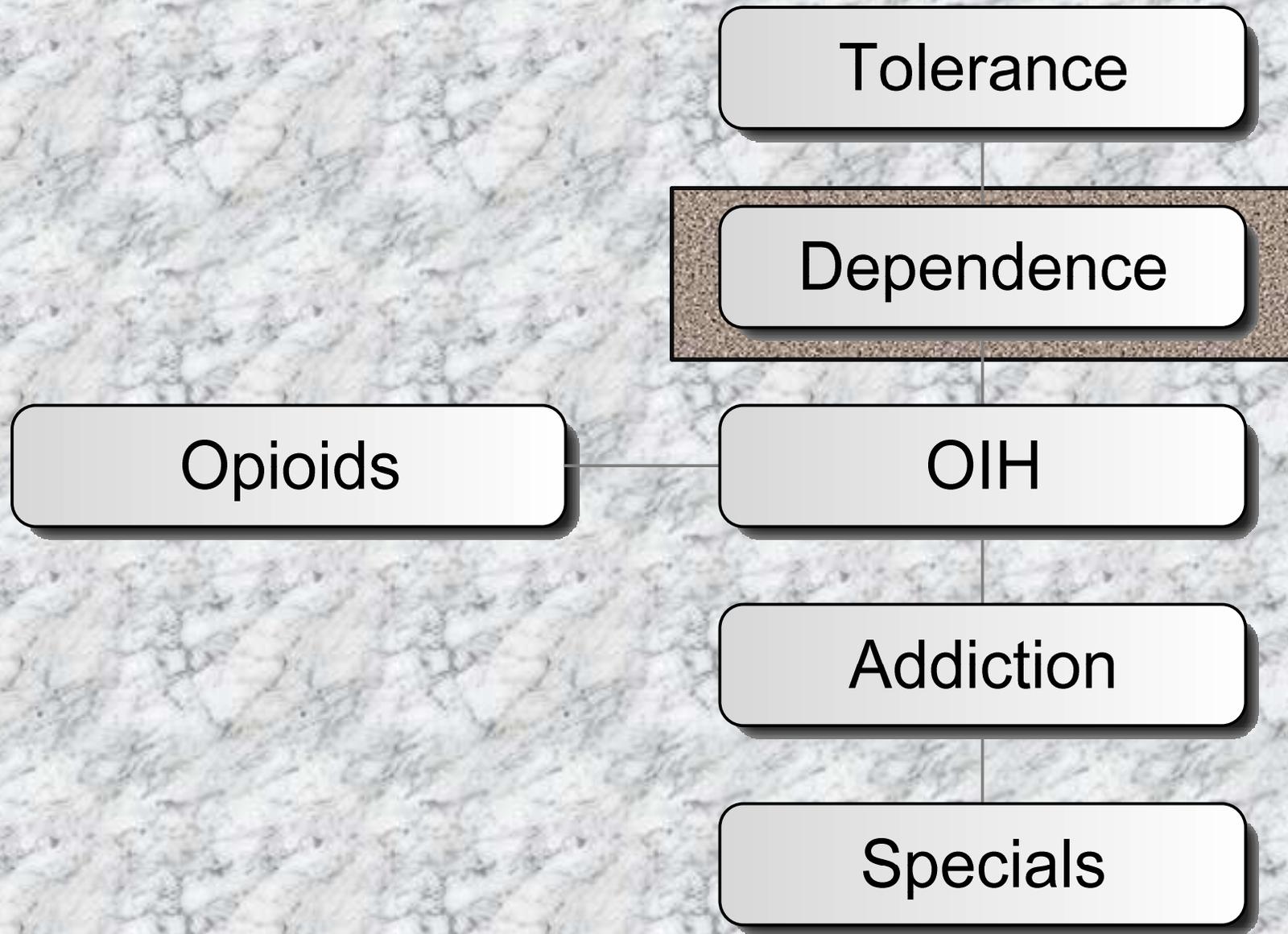
- Definition ?
 - Diminuation of one or more of the drug effects
- Consequences ?
 - Higher doses requested
- Postoperative pain increased
 - Up to 3 to 4 times more opioids

Hadi, 2006, 1190-9

De Leon-Casasola, 1993, 302-7



Rule 1
Prefer regional anaesthesia



Dependence

- When withdrawal?
 - 30 mg morphine i.v. for 2 to 4 weeks
 - abrupt cessation
 - rapid dose reduction
 - administration of antagonists

Hadi, 2006, 1190-9

Dependence

- Withdrawal symptoms
 - Nausea/vomiting
 - Diaphoresis
 - Diarrhoe
 - Abdominal cramps
 - Seizures
 - Even death

Hadi, 2006, 1190-9

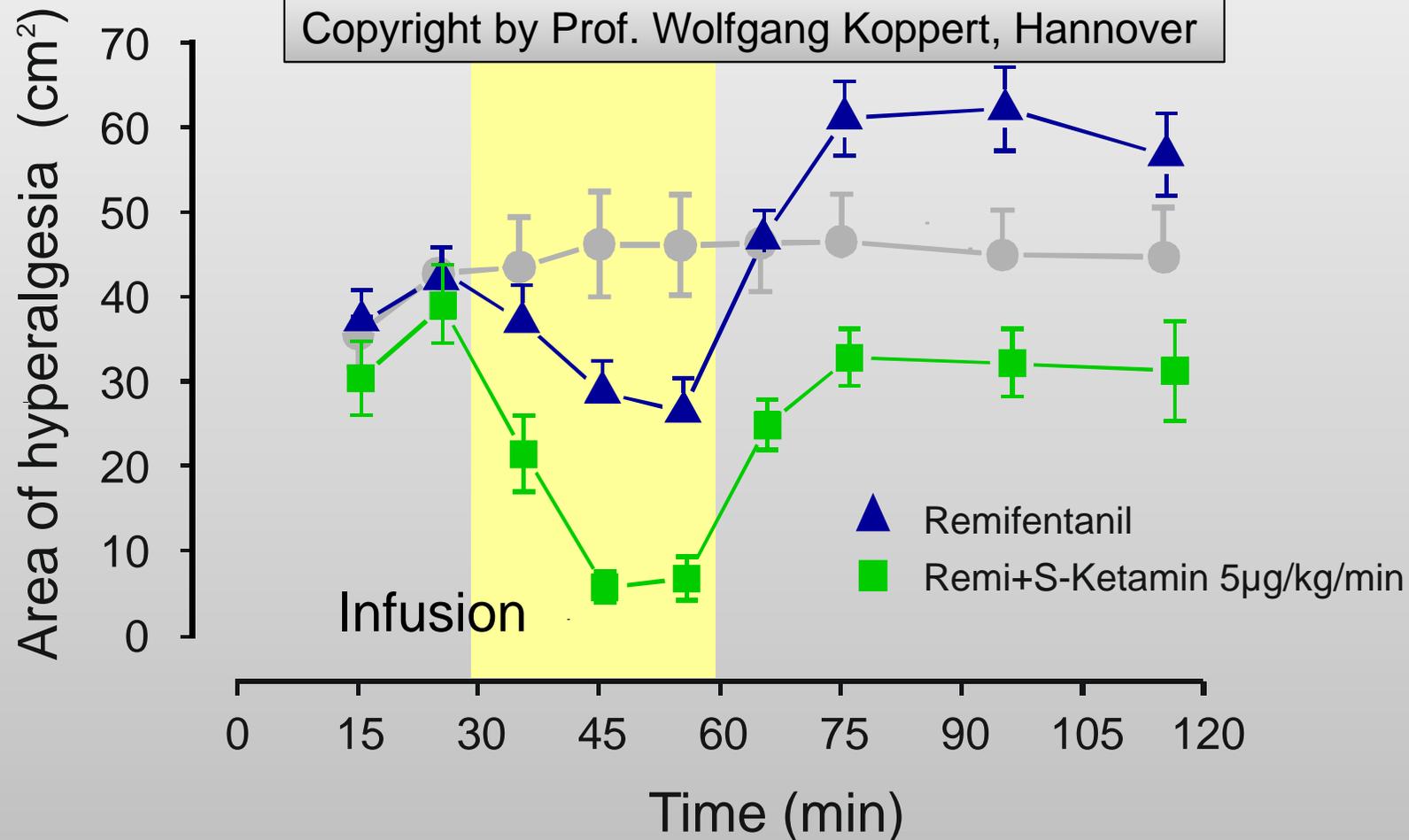
Hadi, 2006, 1190-9

Rule 2

Go on with opioids



Opioid induced hyperalgesia



Ketamine

- Prevents opioid induced respiratory depression
- Analgesia especially in patients with a history of opioid use

Rule 3

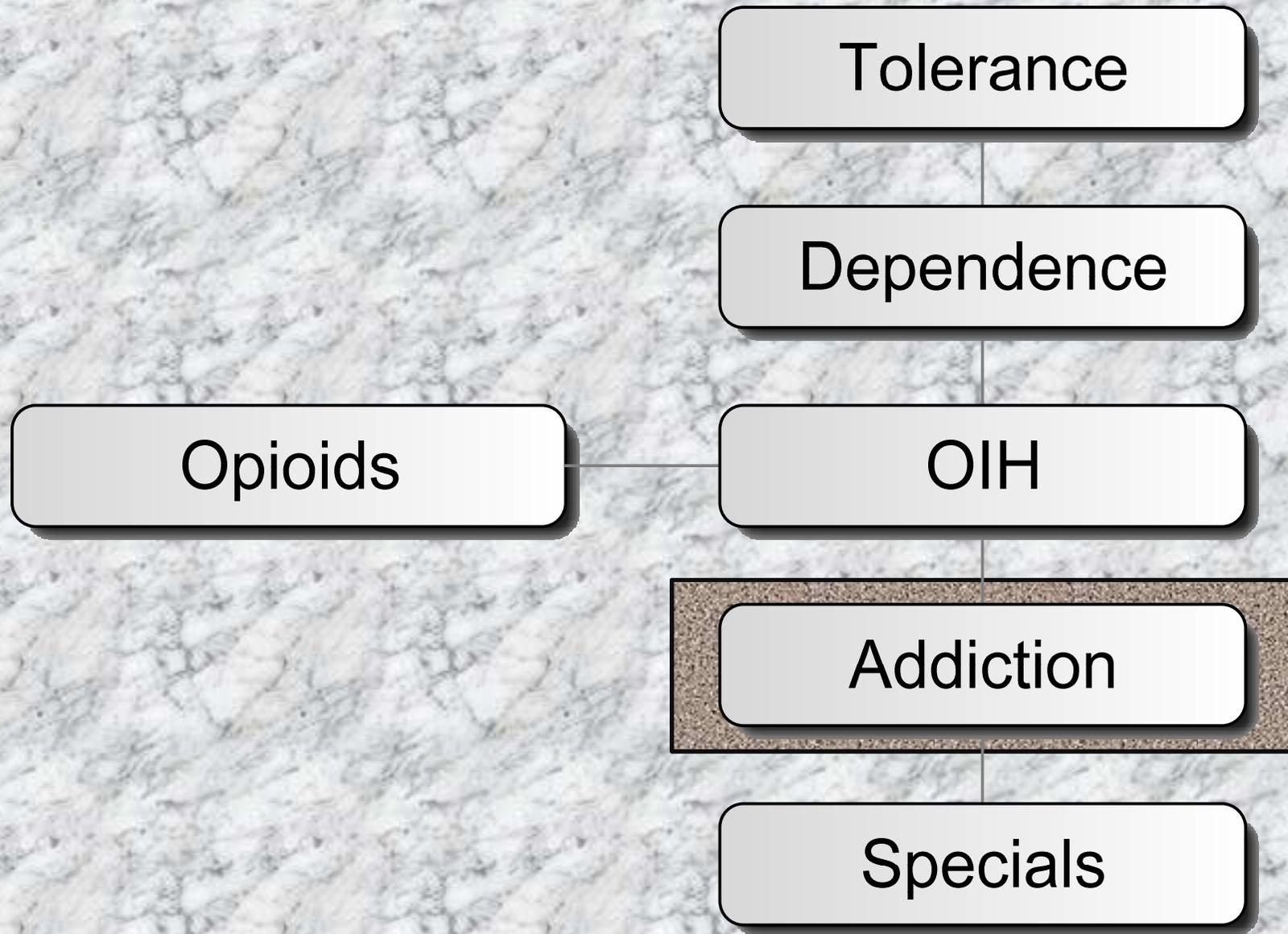
Ketamine probably useful

51-70

, 2005, 1405-28

		Maintenance	
		Infusion	Bolus
Very painful	0.5 mg / kg KG	0.5 mg / kg KG / h	0.25 mg / kg 30 Min
Moderately painful	0.25 mg / kg KG	0.25 mg / kg KG / h	0.125 mg / kg 30 Min

Richebé, 2009, 969-81



Addiction

- Characterized by
 - (four “C” ‘s)
 - Impaired control over drug consume
 - Compulsive use
 - Continued use despite harm
 - Craving
- 12% in chronic non-cancer pain patients
- Corresponding with alcohol and drug abuse among general population

Regier, 1984, 934-58

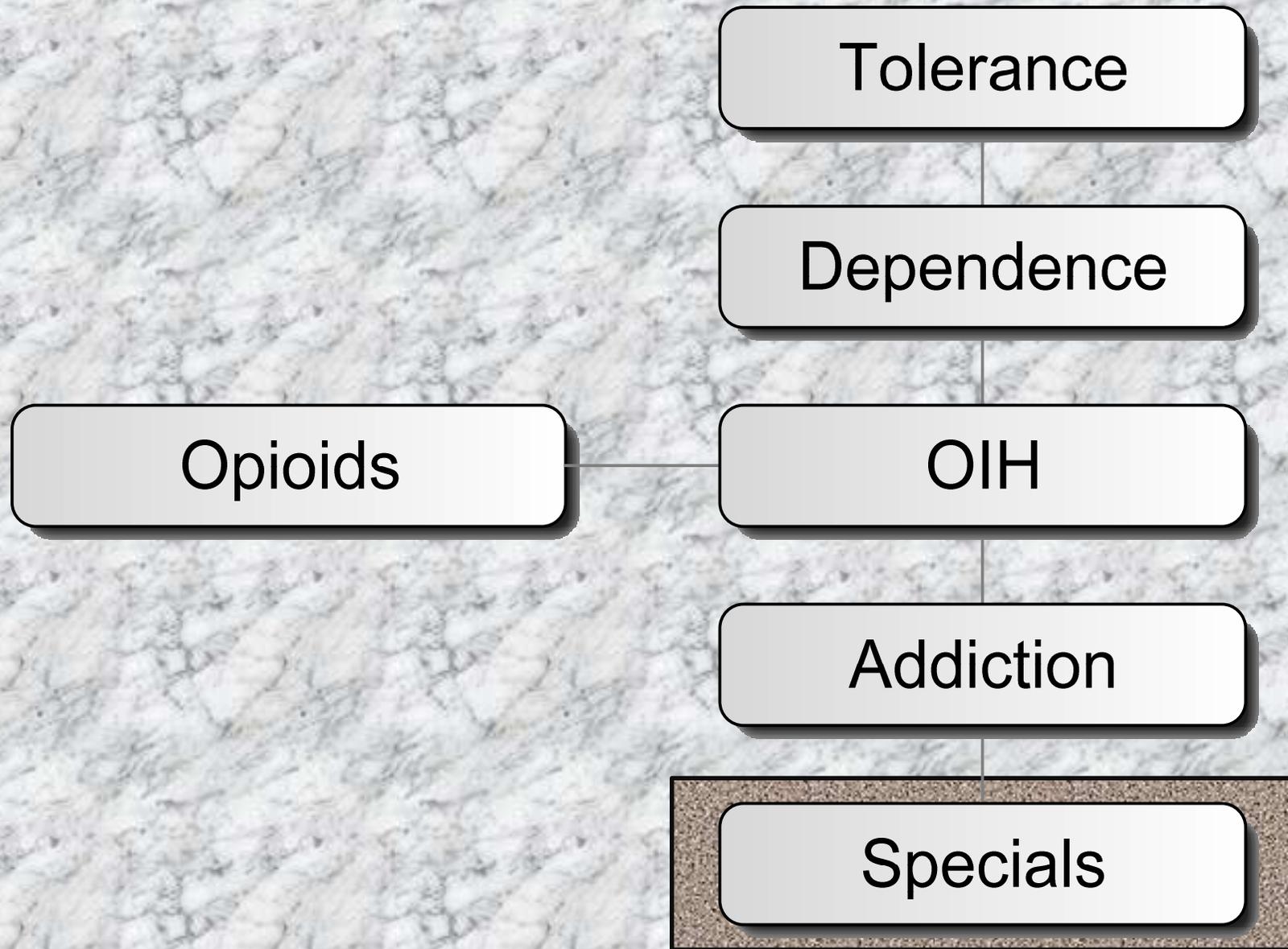
Addiction

Rule 4

Richebé, 2009, 969-81

- Baseline opioid
- No opioid
- Heroin, methadone
- Hyperalgesia
- Possible: regional anaesthesia

Rule 4
No weaning



TTS opioids

- TTS opioids → CAVE: altered absorption perioperatively
 - Hypothermia
 - Hyperthermia
 - Administration of intraoperative fluids

Frolich, 2001, 647-8

Rose, 1997, 764-72

Opioid rotation

- Data from older studies
- Not designed for dose conversion
- Single dose studies

Hadi, 2006, 1190-9

<http://usb.x-service.ch/>

Patient controlled analgesia

- Different and several recommendations
- Not evidence based
- For example:
 - Per os opioid: go on
 - PCA with 1 to 1.5 to 2 mg bolus all 8 minutes
 - Perhaps combined with ketamine

Overview

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graph LR; Overview[Overview] --- Introduction[Introduction]; Overview --- Opioids[Opioids]; Overview --- Antidepressants[Antidepressants]; Overview --- Anticonvulsants[Anticonvulsants];
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Introduction

Opioids

Antidepressants

Anticonvulsants

Antidepressants

- Amitriptyline

- Intraocular

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Rule 5

Go on with antidepressants
(important analgesics)

hypotension

infusion / depression

ident

Kudoh, 2002, 132-6

De Baerdemaeker, 2005, 333-8

Overview

Introduction

Opioids

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Anticonvulsants

Anticonvulsants

- Gabapentin (Neurontin)
- Pregabalin (Lyrica)
- Effective for chronic pain conditions
- Proven benefit in reducing p.o. pain withdrawal symptoms

Hadi, 2006, 1190-9

Go on with anticonvulsants

Rule 6

Conclusions

- Use regional anaesthesia
- Ketamine probably useful
- Don't stop
 - Preoperative opioid-therapy
 - Preoperative antidepressant-Th
 - Preoperative anticonvulsant-Th