Differenzierte Opioidtherapie

Einsatz bei Komorbiditäten

Wiener Gesundheitsverbund

Für die Stadt Wien

ekkehard.schweitzer@gesundheitsverbund.at

11.10.2021

Wien, 15.06.2009
DrWPF/DrHKA

Betrifft: DIPIDOLOR® (Piritramid) Ampullen – unsachgemäßer Gebrauch

Jede Verdünnung von Piritramid stellt in Österreich allerdings eine Off-Label-Anwendung dar.

Wir empfehlen daher im Moment eine Umstellung auf Vendal® (Morphinhydrochlorid) 10 mg – Ampullen.

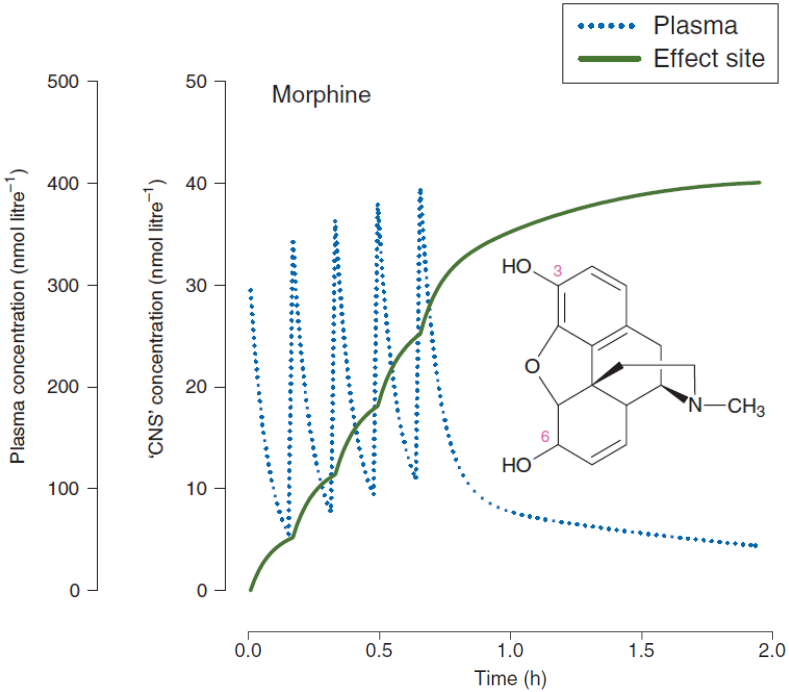
Das Verdünnen von Vendal®-Ampullen mit 0.9% NaCl oder 5%iger Glucoselösung ist laut Fachinformation möglich.

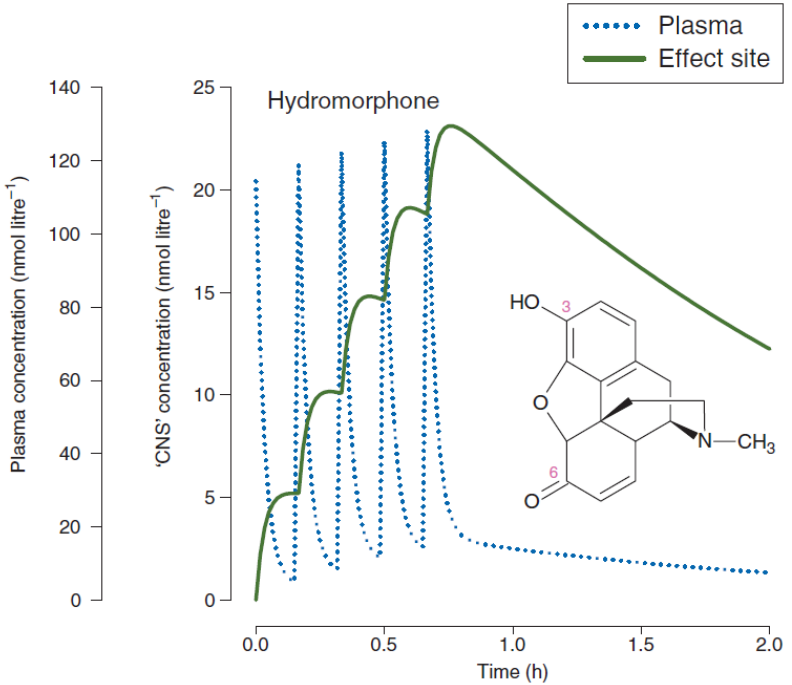
Siehe Fachinformation (Beilage) Punkt 6.2. Inkompatibilitäten.

Die Injektionslösung darf mit keinen anderen Produkten vermischt werden.

Effect Site Concentration

Vergleich Morphin – Hydromorphon





Felden L. et al.: BJA 2011; 107 (3): 319-328

Wirkdauer

Dosis

Halbwertszeit ($T_{1/2}$)

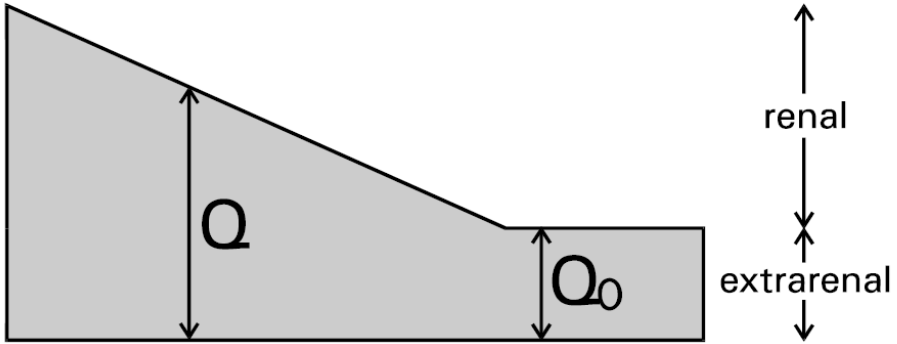
Verteilungsvolumen (V_T)

Kontextsensitive Halbwertszeit

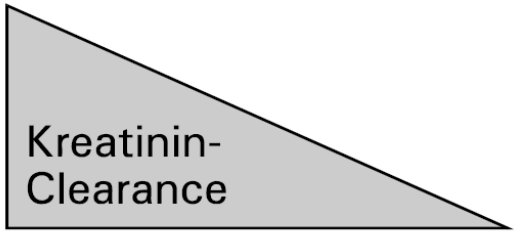
Extrarenale Dosisfraktion Q_0

bei Anurie renale Ausscheidung 0

$Q_0 < 0{,}5$



$Krea_{Cl} < 50$



Niereninsuffizienz

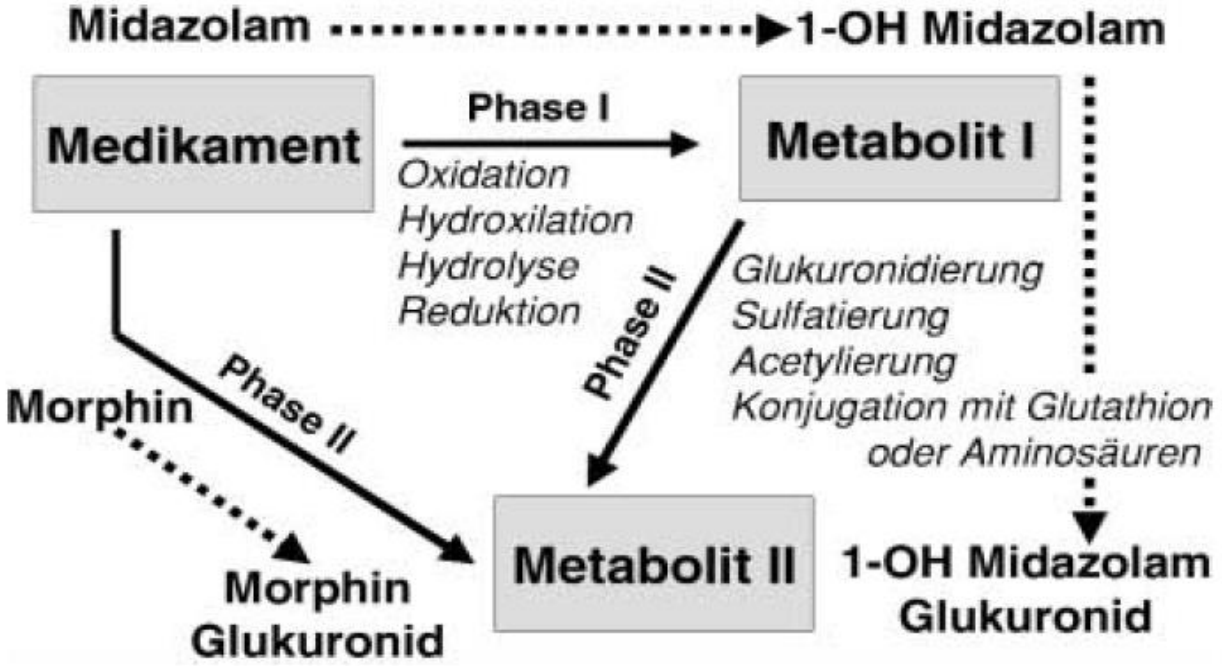
EFIC

- empfohlen
  - Buprenorphin
  - Fentanyl
  - Oxymorphone
- „with caution“
  - Hydromorphone
  - Oxycodone
- should […] not be prescribed“
  - Codeine
  - Dextropropoxyphene
  - Morphin
  - Pethidin
  - Tramadol

O´Brien T. et al.: EJP 2017; 21: 2-19

CYP abhängige und unabhängige hepatale Metabolisierung

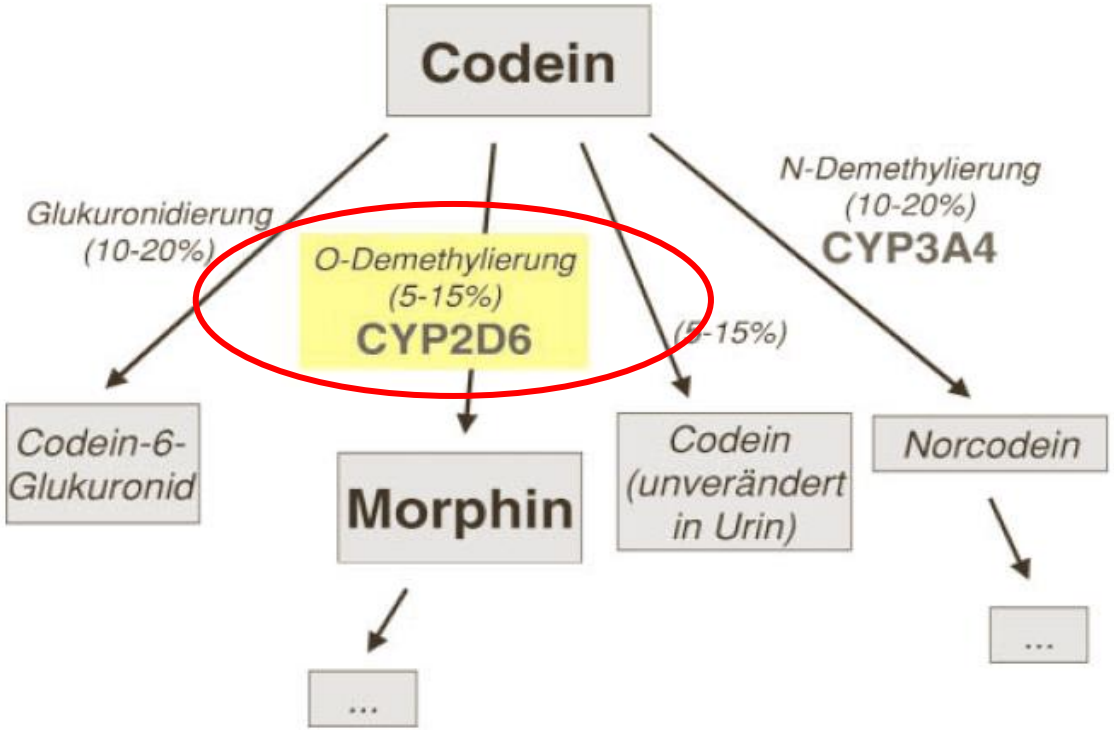
direkte Glucuronidierung ist weniger interaktionsgefährdet



aus Papp-Jambour et al. Anästhesist 2002; 51: 2-15

Elimination

unterschiedliche Abbauwege



aus Papp-Jambour et al. Anästhesist 2002; 51: 2-15

Lebererkrankungen

EFIC

- veränderte Pharmakokinetik
  - vermehrtes portocavales Shunting – First pass Effekt ↓
  - reduzierte Produktion von Transportproteinen – Plasmaspiegel ↑
  - verminderte metabolische Aktivität der Leber – hepatale Clearence ↓
- „only relevant in severe lever disease“

- Verlängerte Dosierungsintervalle, reduzierte Einzeldosen
  - Hydromorphon, Morphin, Oxycodon, Tapentadol, Tramadol
- Vermeiden
  - Codein, Pethidin

O´Brien T. et al.: EJP 2017; 21: 2-19

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Fentanyl Iontophoretic Transdermal System

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Instanyl®

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Effentora®

Vellofent®

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P2Y12 Inbibitoren

Hemmung der GP-IIb/IIIa-Aktivierung (ADP)

Copyright ?

Storey R.F. et al.: J Am Coll Card 2020; 75 (3): 301-303

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Drugs Aging (2017) 34:437–443
DOI 10.1007/s40266-017-0455-9

SYSTEMATIC REVIEW

The Comparative Risk of Delirium with Different Opioids: A Systematic Review

Lieke M. Swart[1] · Vera van der Zanden[1] · Petra E. Spies[2] · Sophia E. de Rooij[1,3] · Barbara C. van Munster[2,3]

There are no convincing data that the risk of delirium in elderly patients depends on the type of opioid.

Drugs and Aging 2017; 34 (437-332

	Biotransformation	Aktive Metaboliten	Q_0	$T_{1/2}$ (h)
Tramadol (1970er, USA 1990er)	CYP 2D6 (stark) CYP 2B6, 3A4 (schwach)	O-Desmethyltramadol	~ 0,5	6
Nalbuphin	Glucuronidierung CYP 2C9, CYP 2C19	Nalbuphin-6-Glucuronid	hoch*	3
Piritramid (1960er)	CYP	k.A.	1,0*	7
Morphin (Anfang 20. Jh.)	Glucuronidierung	Morphin-6-Glucuronid (30%) M -3-G (60%, inaktiv)	0,9	2,4
Oxycodon (1916)	Glucuronidierung CYP 3A4/A5, CYP 2D6	Oxymorphon (19%, CYP 2D6) Noroxycodon (45%, inaktiv)	0,89	2,3
Methadon (1930er)	CYP3A4, CYP 2B6	Keine	k.A.	30 (7-130)
Hydromorphon (1921)	Glucuronidierung	Keine (Hydromorphon-3-Glucuronid neurotoxisch)	0,23	2,6
Burprenorphin (1977)	CYP 3A4, CYP 2C8 Glucuronidierung	Norbuprenorphin	1	3**
Fentanyl (1960)	CYP 3A4	Keine	0,9	3

*keine Daten zum Einsatz bei Niereininsuffizienz

** CAVE: langsame Dissoziation vom μ-Rezeptor

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M-6-G:
- $T_{1/2}$ 2,8 h
- $Q_0 \leq 0,3$
- $T_{1/2}$ bei Niereninsuffizienz bis 30 h

*keine Daten zum Einsatz bei Niereininsuffizienz

** CAVE: langsame Dissoziation vom μ-Rezeptor

Buprenorphin

Methadon

Pethidin

Fentanyl

Morphin

Piritramid

Hydromorphon

Nalbuphin

Tapentadol

Oxycodon

Tramadol

ekkehard.schweitzer@gesundheitsverbund.at 11.10.2021

		Wirkstärke (iv.)	Typ. Ampulle	
Tramadol		0,1	100 mg	(1 ml)
Nalbuphin		0,5	20 mg	(2 ml)
Piritramid		0,7	15 mg	(2 ml)
Morphin		1	10 mg	(1 ml)
Oxycodon		1	10 mg	(1 ml)
Diacetylmorphin		3	5 mg	(1 ml)
Hydromorphon		5	2 mg	(1 ml)
Burprenorphin		30	0.3 mg	(1 ml)
Fentanyl		100	0.1 mg	(2 ml)

REDUCTION OF POSTOPERATIVE PAIN BY ENCOURAGEMENT AND INSTRUCTION OF PATIENTS*

A Study of Doctor-Patient Rapport

LAWRENCE D. EGBERT, M.D.,† GEORGE E. BATTIT, M.D.,‡ CLAUDE E. WELCH, M.D.,§ AND MARSHALL K. BARTLETT, M.D.¶

BOSTON

MANY reports have discussed the treatment of patients suffering after operation. Narcotics are not without danger; they also vary considerably in effectiveness. Hypnosis will reduce pain but is difficult to achieve and requires special training for the operator. Despite considerable effort the problems of treating postoperative pain remain.

Janis[1] has shown that patients who were told about their operations before the procedure remembered the operation and its sequelae more favorably than those who were not well informed. We have determined the effects of instruction, suggestion and encouragement upon the severity of postoperative pain.

METHOD

the following day, they were told what would be done about the pain. They were advised that pain is caused by spasm of the muscles under the incision and that they could relieve most of the pain themselves by relaxing these muscles. They could achieve relaxation by slowly taking a deep breath and consciously allowing the abdominal wall to relax. Also, they were shown the use of a trapeze that was hanging over the middle of the bed (control patients also had the trapeze but were not instructed by the anesthetist). Special-care patients were taught how to turn onto one side by using their arms and legs while relaxing their abdominal muscles. Finally, they were told that at first they would find it difficult to relax completely. If they

Egbert L. et al.: NEJM 1964; 270 (16): 825-827

Vol. 270 No. 16 POSTOPER

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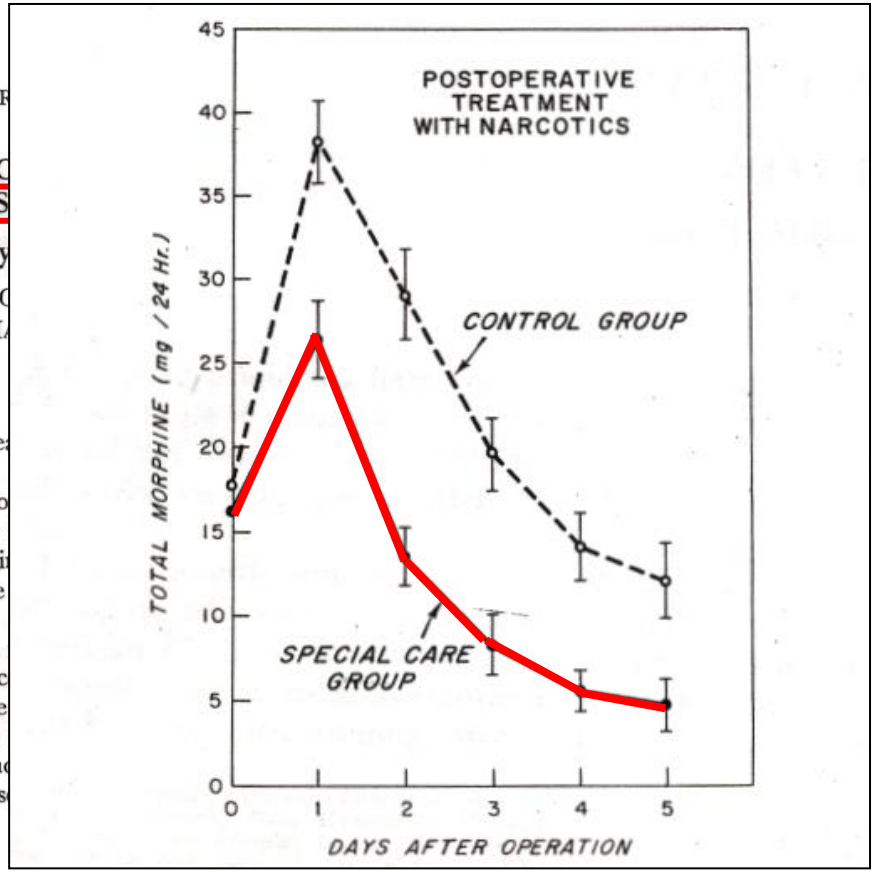

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Prof. Dr. Andrea Michalek-Sauberer

Priv. Doz. Dr. Sylvia Reichl