

HKCEM – Tox Subcom Case presentation

Thomas Au
PYNEH
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Case presentation

De-Ville

- F/26
- Hx of soft drug abuse
- Found unresponsive in bed at 6 am
- Suicidal notes +
- With antiseptic bottle (half remained) in bedside
- Lt wrist superficial cut
- Had taken alcohol last night 12 MN – 2 AM

Vital signs

- GCS 3/15
- BP 104/70 P 97
- Pupils 3 mm reactive
- Limbs flaccid
- Vomitus: yellowish, smell of antiseptic
- ECG: SR, QRS 96 & QTc 463

How to manage?

AED Mx

Any differential diagnoses?

- Intubated with RSI
- CXR normal
- Blood taken
- CT brain done at 07:32 → normal
- Admitted to ICU
- Initial blood result: K 3.2, otherwise NAD
- ABG: pH 7.339
HCO₃ 19.7
BE -5.5

ICU progress

- Given anaxate 0.2 mg IV at 07:50
- → GTC seizure x a few minutes at 08:56
- Aborted by valium IV 10 mg
- Followed by IV dilantin

What happen ??

Withdrawal seizure
due to BZD ?

Ix results

- Urine toxicology screen → unremarkable (barbiturates, opiates, cannabinoids, BZD all -ve)
- Blood x panadol, salicylate → undetectable, ethanol 9.3 (blood taken at 11 am)

Outcome

- Recovered & extubated at 14:36 same day
- Throat pain & epigastric pain
- OGD next morning → mild sloughing off of oesophageal mucosa at 21 – 35 cm, small hiatus hernia
- Mx with zantac
- To med ward after 28 hrs in ICU
- Home on D3 after psychiatrist seen + FU

Summary

- GI irritation after antiseptic ingestion
- ? Withdrawal seizure due to chronic BZD or hypnotics use

De-Ville antiseptic solution

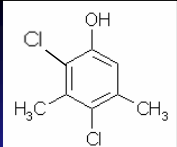
- Extensive internet search from Yahoo:

DE-NOL TAB 120MG PRIMAL CHEMICAL CO LTD FLAT-A H01 BUN IND BLDG 7/F 6 WING YIP ST, KLN	BISMUTH SUBCITRATE HK-33500
DE-VILLE ANTISEPTIC LIQ 2% DICHLOROXYLENOL	HK-24802

Search from DH: Registered Pharmaceuticals in HK:
No results found for Reg. No.: HK-24802
Other brand names with dichloroxylenol: 11 types
All contain 2% dichloroxylenol

De-Ville antiseptic

- Possible ingredients:
- DCMX (2%)
- Properties similar to Dettol®



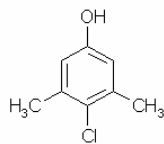
Dichlorometaxylenol (DCMX)



Dettol®

Ingredients:

- PCMX (4.8%)
- isopropyl alcohol
- pine oil
- castor oil soap
- caramel
- water



Parachlorometaxylenol (PCMX)

Complications of Dettol®

- Irritation to oral mucosa, & upper GI tract
- Upper airway obstruction
- Aspiration pneumonia, ARDS
- CNS depression
- Renal impairment in a small percentage

Related to gastric lavage

Serious complications associated with Dettol poisoning
CHAN et al. QJM.1993; 86: 735-738

Toxic potency of chlorinated phenols

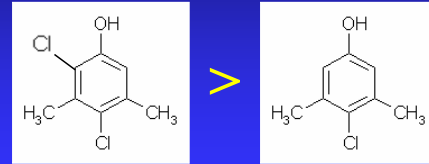
- Potency ↑ with the number of chlorines
- Potency ↓ if the chlorines are attached in the *ortho* position

Toxicology and Industrial Health, Vol. 21, No. 3-4, 93-111 (2005)
DOI: 10.1191/0749233705th204oa
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Comparative toxic potency ranking of chlorophenols
W. E. Pepekko et al

Toxic potency

DCMX versus PCMX



DCMX & PCMX (chlorinated phenols)

- Physical properties:
 - ◆ colourless, weakly acidic
- Toxicity:
 - ◆ GI tract: irritation after ingestion
 - ◆ CNS: depression, coma,
 - ◆ Resp: aspiration

Factors that can make an irritant → strong irritant or corrosive agent

- Concentration of the irritant:
 - ◆ E.g. conc. Dettol vs diluted Dettol
- Volume of ingestion:
 - ◆ E.g. 200 ml vs 20 ml
- Contact time with oesophageal mucosa
 - ◆ E.g. vomiting better than sedation

Mx for irritant antiseptic ingestion (chlorophenols)

- Supportive Mx
- Protect airway to prevent aspiration
- OGD: to assess extent of damage in upper GI tract
- H₂ Blocker

THANK YOU