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Acute intoxications: The role of Poison Control Centers

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Case

- Man, 20 years

R/ Carbamazepine because of seizures epilepsie
Naltrexon

Dailys cannabis use

- Between 10 and 11 AM: suicide attempt

30 x 400 mg carbamazepine slow release

10 x 50 mg naltrexon

4 PM at ED

- ABCD stabile
- E, temp 34,6;

- Breathing OK, saturation 100%
- RR 127/77; pulse 99/min
- EMV maximal
- Neurologic: agitated, pupils no abnormalities

- Lab:

- Carbamazepine: 22,4 mg/l
- Kidney and liver OK
- glucose 7,0 mmol/l
- Na, Ca en K normal

- ECG: 92/min. no abnormalities

And now?

	Vergiftigingen.info	Toxicologie.org	Poisindex	Toxbase
Gastric Lavage	Consider if < 1 hr after ingestion	Sensible if < 1 hr after ingestion	Consider if < 1 hr after ingestion If ingestion slow release or bezoar, tha consider > 1 hr after ingestion	-
Multiple dose activated charcoal	Consider (enterohepatic cycle)	Consider (enterohepatic cycle)	Consider if: • asymptomatic patiënt if absorption from the gut can be expected • symptomatic patiënt with airway protection	Consider, in symptomatic patient
Total bowel lavage	Consider if potentially (moderately) severe intoxication with slow release and bezoar	-	Consider if severe intoxication with large amput of slow release tablets	-

Beleid (II)

	Vergiftigingen.info	Toxicologie.org	Poisindex	Toxbase
Elimination-enhancement	Hemodialysis, hemoperfusion possibly sensible	• Consider hemoperfusion if plasma concentration > 25 mg/l and severe clinical situation. Effect comparable with MDAC • Hemodialysis, peritoneal dialysis and forced diuresis ineffective	• Hemodialysis en peritoneal dialysis not effective • Hemoperfusion successfully used • Case reports indicate possible effectivity of high-efficiency hemodialysis (HEHD/HFHD)	-
Monitoring	-	Observation of cardiac and respiratory function indicated	Monitoring of saturation en continious cardiac monitoring. ECG ad admittance and every hour in case of severe intoxication	Observation/ monitoring respiratory and cardiac function at least during 12 hours

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Acute intoxications: Differences in management between six Dutch hospitals

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Centre	Number of episodes	Age Mean (SD; range)	Gender % of females (N)
Hospital A	124	34.7 (15.8; 14-91)	41.1 (51)
Hospital B	148	33.6 (14.0; 14-86)	48.6 (72)
Hospital C	145	34.4 (13.2; 16-80)	55.2 (80)
Hospital D	267	37.1 (14.8; 16-93)	59.6 (158)
Hospital E	333	37.2 (13.7; 16-83)	59.8 (199)
Hospital F	166	36.9 (14.4; 14-83)	53.0 (88)
Total	1183		
P value		0.045	0.003

Hospital A: Amsterdam Medical Centre (AMC) Amsterdam.
Hospital B: Radboud University Medical Centre (RUMC) Nijmegen.
Hospital C: Jeroen Bosch ziekenhuis (JBZ) Den Bosch.
Hospital D: Isala Klinieken Zwolle.
Hospital E: Rijnstate Ziekenhuis Arnhem.
Hospital F: Canisius Wilhemina Ziekenhuis Nijmegen.

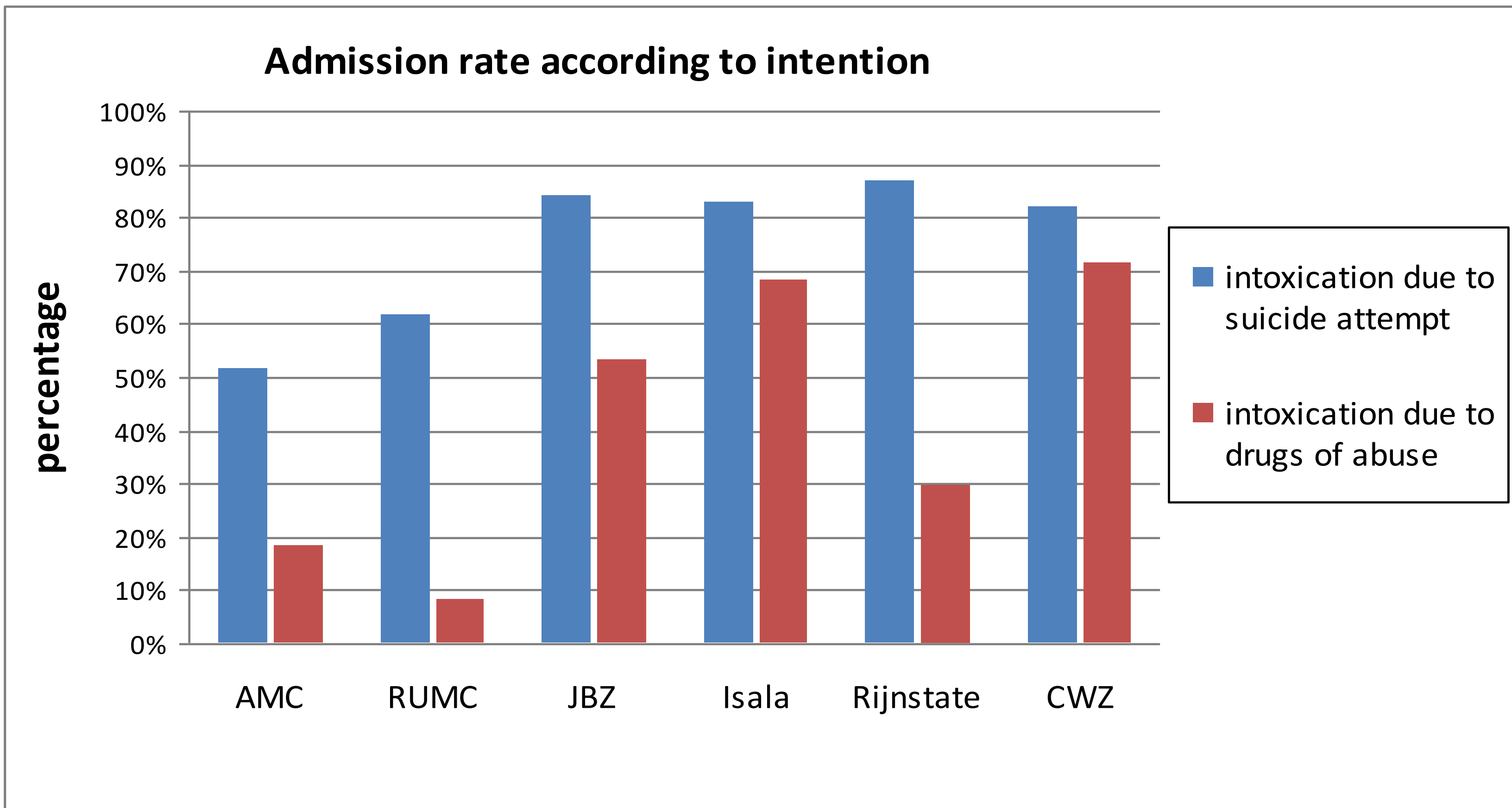
Intention of poisoning

percentage

80%
70%
60%
50%
40%
30%
20%
10%
0%

TS
Drugs of abuse
other/unknown

hospital A
hospital B
hospital C
hospital D
hospital E
hospital F


Admission rate according to intention
percentage
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
AMC
RUMC
JBZ
Isala
Rijnstate
CWZ
intoxication due to suicide attempt
intoxication due to drugs of abuse

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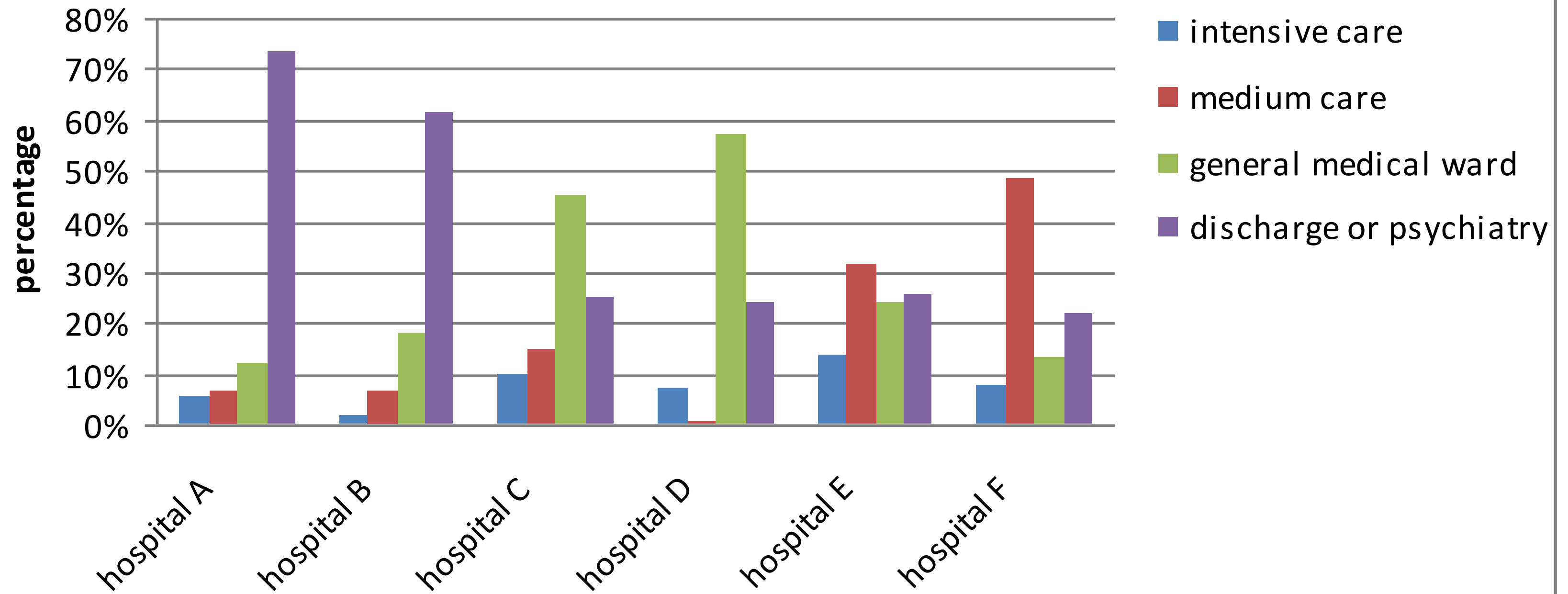

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N = 325

Table 5 Complications and treatments on the ward after admission

	Cases (n)	Percentage
Admitted	134	100.0
Complication:	16	11.9
Dysrhythmia	6	4.5
Prolonged QT	3	2.2
SVT	2	1.5
VT	1	0.7
Bradycardia	1	0.7
Hypotension	2	1.5
Desaturation	1	0.7
Hypoglycaemia	3	2.2
Aspiration	4	3.0
Other	4	3.0
Treatment:	74	55.2
Oxygen therapy	10	7.5
Continuous infusion	20	14.9
Bolus infusion	2	1.5
Multiple doses of activated charcoal	5	3.7
Potassium supplementation	8	6.0
N-Acetylcysteine	33	24.6
Flumazenil	5	3.7
Naloxone	3	2.2
Antibiotics	5	3.7
Ventilatory support	6	4.5
Haemodialysis	1	0.7
Reanimation	1	0.7
Other	8	6.0

SVT, supraventricular tachycardia; VT, ventricular tachycardia.

Role of the PCC?

- Internet information
- Telephone calls
- Who are the customers?
  - Patients? Unexperienced doctors?
- What role currently
- What role in the future

- Mrs A. van Riel (NVIC, Utrecht)
- Mr. G. Verstegen (Belgisch Antigif centrum)
- Mr. J. Dear (UK NPIS)

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