SAQ for Monash Trial exam 2018 (18 marks)

A 12yo boy has had a Biers Block performed for manipulation of a distal radius/ulnar fracture.

During the procedure he develops systemic local anaesthetic toxicity.

1. What is the mechanism of local anaesthetic toxicity (1mark)1

* *Sodium channel blockade*

1. List 4 serious clinical complications of systemic local anaesthetic toxicity (4 marks)3

CNS (2 marks)

* *CNS depression*
* *Seizures*
* *Apnoea/arrest*

Cardiovascular (2 marks)

* *Dysrhythmias: brady, atrial/ventricular dysrhythmia, asystole*
* *Hypotension*
* *Arrest*

***Death ; HOW?***

***Perioral numb/tinnitus NOT serious clinical complication.***

***MetHb : prilocaine***

1. What 4 ECG features would indicate systemic toxicity (4 marks)2

*Ventricular dysrhythmia*

*Widening of QRS*

*Large terminal R wave in aVR, increased R/S ration (>0.7) in aVR*

*QT prolongation*

*PR prolong*

***Not just tachycardia unless specify early with assoc HT.***

1. Complete the table with 3 pharmacological agents (from different classes) that can be used to treat the Cardiovascular effects of systemic toxicity (9marks) 5

|  |  |  |
| --- | --- | --- |
| Agent | Dose | Frequency/rate |
| *Sodium Bicarbonate* | *2mmol/kg* | *Repeat 1-2minutes* |
| *Lipid Emulsion* | *1 ml/kg* | *Repeat 5minutes x 2* |
| *Adrenaline/NA* | *0.15mg/kg* | *Titrate up to 0.5mcg/kg/min* |

NOT Ventilation, IV fluids, Midazolam, Calcium.

General Feedback

* 1 work/phrase per line
* Hand writing
* Try to write something!

Mean score 12/18 66% High 18, Low 8

Pass mark set 11/18 61%

Pass 24 out of 37 Candidates 64%

8 1

8.5 2

9 2

9.5 1

10 7

11 3

12 4

13 7

13.5 1

14 2

14.5 1

15 1

15.5 1

16 1

17 1

18 1