ABG numericals

Sepsis
Septic SHOCK
↓ PERFUSION
lactate ++
M. ACIDOSIS

D.K.A
* BOH Butyrate

acute Exac of
Ch. bronchitis
CO_2 ++
H_2CO_3 ++

1 2 3

pH 7.35-7.45	pCO2 35-45 mm	HCO3 22-26 meq	Interpretation
↓	↓	↓	Metabolic acidosis
↑	↑	↑	" alkalosis
↓ =	↑	↑	Respi acidosis
↑	↓		" alkalosis

ROME

Respi : opposite

Metabolic : equivalent

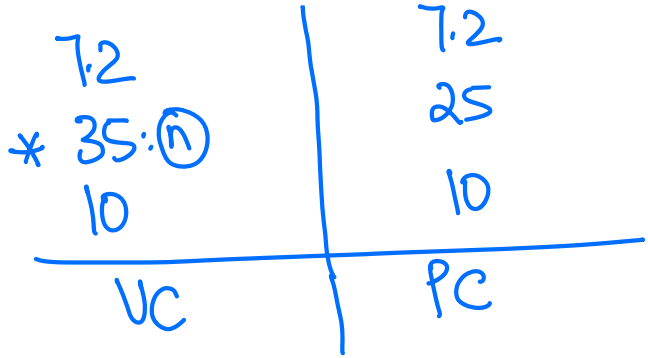
1. Which is correct about compensation in a diabetic patient admitted with diagnosis of diabetic ketoacidosis?

a. Rise of CO2
b. Fall of CO2
c. Rise of bicarbonate
d. Fall of bicarbonate → 1° change

acidic pH → (+) → kussmaul breathing
R. centre
RR ↑
CO_2 washout

2. Interpret the ABG report pH=7.2, pCO2=25 mm Hg and HCO3= 10 meq/L

a. Metabolic acidosis
b. Metabolic alkalosis
c. Respiratory acidosis
d. Respiratory alkalosis



3. Which is correct about management of this patient of panic attacks with following ABG report pH=7.5, pCO2 = 20 mm Hg, HCO3=18

a. Counselling for regular medication
b. Paper bag rebreathing
c. Low flow oxygen therapy
d. High flow oxygen using venti mask

4. Best for management of COPD patient admitted with following report pO_2=85 mmHg, pH = 7.2, pCO_2=60 mmHg and HCO3 = 28 meq/L

↓ ↑

PC Respi acidosis

a. NIV

b. PSVT

c. High flow oxygen @12L/ min using no rebreathing mask

d. Low flow oxygen @1L/ min for 15 hours /day

ABC: NIV

* Acute pulm edema
* acute exacN of ch. Bronchitis
* COVID-19

5. COVID- 19 client on day 8 of illness is having desaturation. His ABG status is as below: pH=7.2, pO2=70 mmHg, pCO2=50 mmHg and HCO3 = 27 meq/L interpretation is?

a. Metabolic acidosis
b. Metabolic alkalosis
c. Respiratory acidosis
d. Respiratory alkalosis

6. Diabetic client is having vomiting due to eating Chinese food. He is feeling weak and then become unconscious and was admitted to hospital. Comment on ABG. pH=7.5, PCO_2= 49 mmHg and HCO_3 =34 meq/L.

a. Metabolic acidosis
b. Respiratory acidosis
c. Metabolic alkalosis
d. Respiratory alkalosis

Sliding scale

Blood glucose (mg/dL)	Insulin (units)
61-150	0
151-200	3
201-250 *	5
251-300	8
301-350	10
351-400	12
>400	15[a]

[a]Physician should be contacted.

Regular

glucometer

8. Interpret ABG, report pH=7.2, pCO2=40 mmHg and HCO_3 = 20 meq/L?

a. Metabolic acidosis
b. Metabolic alkalosis
c. Respiratory acidosis
d. Respiratory alkalosis

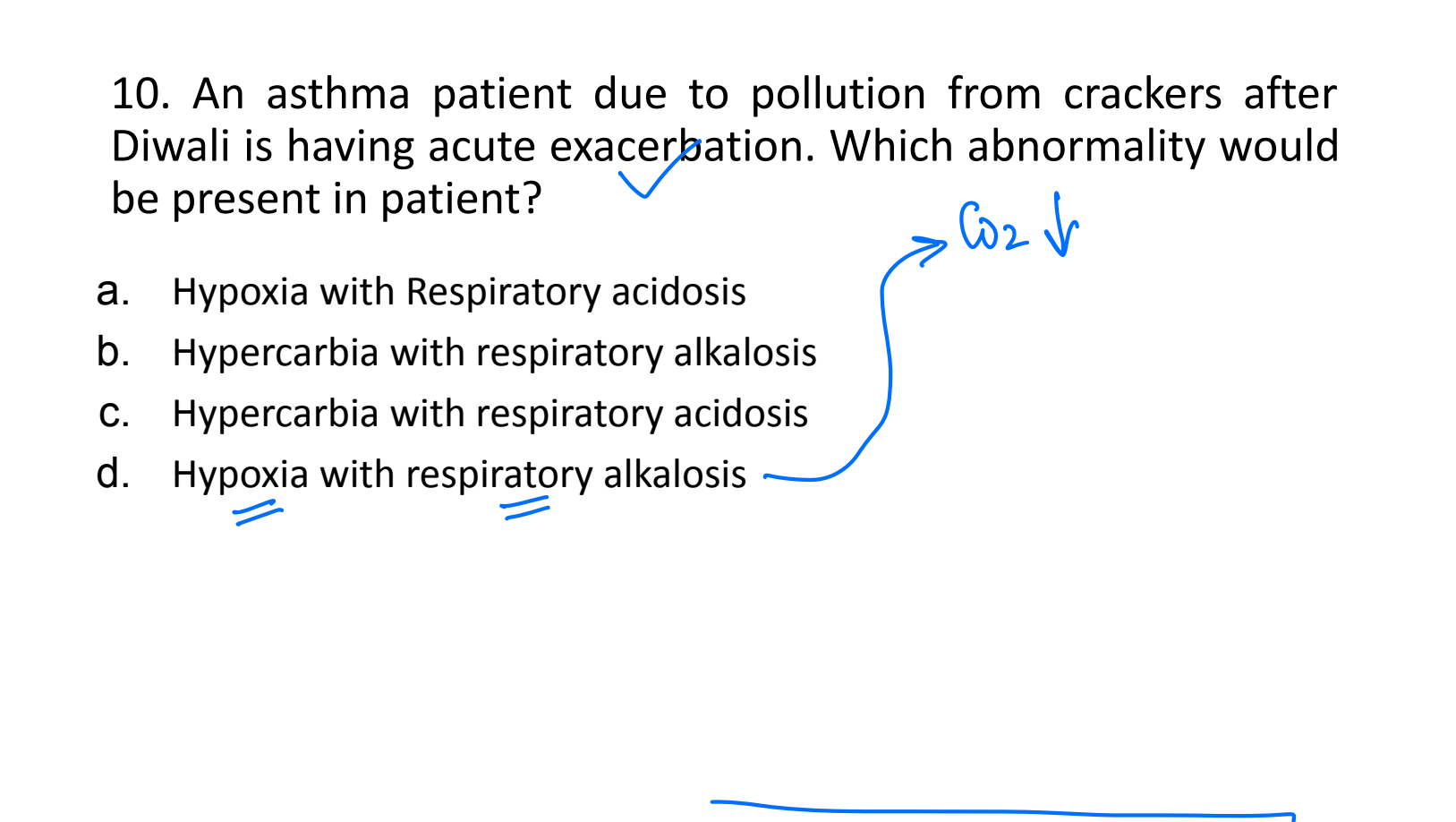
9. Interpret ABG, pH=7.2, pCO_2=60 mmHg and HCO_3 = 28meq/L?

ROME

a. Compensated respiratory acidosis
b. Uncompensated respiratory acidosis
c. Compensated respiratory alkalosis
d. Uncompensated respiratory alkalosis

10. An asthma patient due to pollution from crackers after Diwali is having acute exacerbation. Which abnormality would be present in patient?

a. Hypoxia with Respiratory acidosis
b. Hypercarbia with respiratory alkalosis
c. Hypercarbia with respiratory acidosis
d. Hypoxia with respiratory alkalosis



HYPOBARIC HYPOXIA

11. Army nurse notices that soldier at Siachen base camp is having pH=7.5 and pO2 = 60 mm Hg pCO2 = 30 mm Hg. Which is most likely to be present in the soldier?

a. Frost bite and pain in hands
b. Malingering
c. Internal bleeding with shock
d. Giddiness and headache

R. alkalosis

Tetany

12. Calculate anion gap with sodium = 140 meq/L, K=4.0 meq/L, HCO3=24 meq and chloride = 106 meq/L.

a. 6
b. 8
c. 10
d. 14

Na^+ $Cl^- + HCO_3^-$

$[140] - [106 + 24] = 10$

13. Fluid of choice for metabolic acidosis?

a. Ringer lactate → LIVER → HCO_3^-
b. Normal saline
c. 5% dextrose
d. 3% saline

14. Fluid of choice for metabolic alkalosis ?

a. Ringer lactate
b. Normal Saline
c. 5% dextrose
d. 3% saline

15. Treatment of choice for respiratory acidosis? Co_2 +

a. IPPV
b. Paper bag rebreathing R. alkalosis
c. Normal saline
d. 5% dextrose HYPERNATREMIA > 158 meq/L

M. ACIDOSIS = RL
M. ALKALOSIS = NS
R. ACIDOSIS = NIV
R. ALKALOSIS = Paper bag breathing

16. Treatment of choice for respiratory alkalosis?

a. IPPV
b. Paper bag rebreathing
c. Normal saline
d. 5% dextrose