Gasto cardíaco por ECOTT vs Fick

Parte 1: Descriptivos

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Descriptive characteristics of participants

A total of 243 TTE cardiac output measurements were performed in 81 different time points, from a total number of 52 unique participants. The number of time points assessed per patient was 1 (n = 37), 2 (n = 8), 3 (n = 5), 4 (n = 1), 9 (n = 1). The summary of characteristics of participants is shown in **Table 1**.

Variable	Total sample (N = 52)
Age (years)	
Mean (SD)	45.7 (16.5)
Sex, n (%)	
Female	22 (42.3%)
Male	30 (57.7%)
BMI (kg/m^2)	
Median (IQR)	25.9 (22.5 - 30.3)
BMI categories, n (%)	
Normal	19 (36.5%)
Overweight	17 (32.7%)
Obesity class I	7 (13.5%)
Obesity class II	8 (15.4%)
Obesity class III	1 (1.9%)
Comorbidities, n (%)	
No comorbidities	10 (19.2%)
Overweight	17 (32.7%)
Obesity	16 (30.8%)
Type 2 diabetes mellitus	11 (21.2%)
Systemic arterial hypertension	7 (13.5%)

Variable	Total sample (N = 52)
Alcoholism	3 (5.8%)
Chronic obstructive pulmonary disease	3 (5.8%)
Chronic kidney disease	2 (3.8%)
Type 1 diabetes mellitus	2 (3.8%)
Human immunodeficiency virus infection	1 (1.9%)
Malnutrition	1 (1.9%)
Parkinson's disease	1 (1.9%)
Pulmonary arterial hypertension	1 (1.9%)
Status epilepticus	1 (1.9%)
Diagnosis, n (%)	
Acute respiratory distress syndrome	11 (21.2%)
Traumatic brain injury	10 (19.2%)
Sepsis	9 (17.3%)
Acute kidney injury	8 (15.4%)
COVID-19	7 (13.5%)
Shock	5 (9.6%)
Community-acquired pneumonia	4 (7.7%)
Pancreatitis	4 (7.7%)
Ventilation-associated pneumonia	4 (7.7%)
Diabetic ketoacidosis	3 (5.8%)
Polytrauma	3 (5.8%)
Postsurgical	3 (5.8%)
Cardiac arrest	2 (3.8%)
Urinary tract infection	2 (3.8%)
Abdominal trauma	1 (1.9%)
Acute myocardial infarction	1 (1.9%)
Burns	1 (1.9%)
Endocarditis	1 (1.9%)
Hospital-acquired pneumonia	1 (1.9%)
Hypertensive emergency	1 (1.9%)
Influenza	1 (1.9%)
Peritonitis	1 (1.9%)
Pulmonary thromboembolism	1 (1.9%)
Pyelonephritis	1 (1.9%)
Soft-tissue infection	1 (1.9%)
Strangulation	1 (1.9%)
Tuberculous meningitis	1 (1.9%)
Upper gastrointestinal bleeding	1 (1.9%)

Patient status at the moment of measurement

Out of the total number of measurements, 31 (38.3%) measurements were taken while the patient was under vasopressor use. The number of measurements taken while the patient was under inotropic use was 3 (3.7%). The mean blood pressure was 83.6 (SD: 11.5) mmHg; and heart rate, 94.7 (SD: 19.7) bpm; and median FiO2, 0.33 (IQR: 0.28 - 0.4). A summary of the blood gas analysis is shown in **Table 2**.

Variable (Unit)	**N = 81**[1]
lactate (mmol/L)	
Mean (SD)	1.64 (1.47)
Median (Q1 - Q3)	1.40 (0.80 - 1.90)
FiO2 (%)	
Mean (SD)	0.36 (0.16)
Median (Q1 - Q3)	0.33 (0.28 - 0.40)
pH	
Mean (SD)	7.47 (0.40)
Median (Q1 - Q3)	7.44 (7.38 - 7.50)
HCO3 (mmol/L)	
Mean (SD)	25.18 (6.34)
Median (Q1 - Q3)	25.00 (21.00 - 28.70)
base deficit (mmol/L)	
Mean (SD)	2.09 (9.87)
Median (Q1 - Q3)	0.40 (-4.10 - 7.30)
PaO2 (mmHg)	
Mean (SD)	70.58 (14.49)
Median (Q1 - Q3)	69.00 (62.00 - 76.00)
PaCO2 (mmHg)	
Mean (SD)	37.36 (10.39)
Median (Q1 - Q3)	36.00 (30.00 - 42.00)
SaO2 (%)	
Mean (SD)	0.94 (0.04)
Median (Q1 - Q3)	0.94 (0.92 - 0.96)
PvO2 (mmHg)	
Mean (SD)	37.32 (8.73)
Median (Q1 - Q3)	36.00 (32.00 - 41.00)
PvCO2 (mmHg)	
Mean (SD)	43.42 (10.53)
Median (Q1 - Q3)	43.00 (37.00 - 49.00)
SvO2 (%)	

Mean (SD)	0.66 (0.14)
Median (Q1 - Q3)	0.68 (0.56 - 0.76)
PAlvO2 (mmHg)	
Mean (SD)	187.60 (103.85)
Median (Q1 - Q3)	168.50 (120.00 - 216.00)
CcO2 (%)	
Mean (SD)	15.49 (4.09)
Median (Q1 - Q3)	15.51 (12.60 - 18.50)
CaO2 (ml/dl)	
Mean (SD)	14.24 (3.76)
Median (Q1 - Q3)	14.34 (10.98 - 16.99)
CvO2 (ml/dl)	
Mean (SD)	10.13 (3.73)
Median (Q1 - Q3)	10.00 (6.73 - 13.39)
DavO2 (ml/dl)	
Mean (SD)	4.11 (2.09)
Median (Q1 - Q3)	3.73 (2.80 - 4.81)
ExO2 (%)	
Mean (SD)	0.30 (0.14)
Median (Q1 - Q3)	0.27 (0.19 - 0.41)

[1]Abbreviations: Alveolar oxygen pressure (PAlvO2), Arterial oxygen content (CaO2), Arterial oxygen saturation (SaO2), Arteriovenous oxygen difference (DavO2), Capillary oxygen content (CcO2), Hydrogen potential (pH), Inspiratory fraction of Oxygen (FiO2), Oxygen extraction (ExO2), Oxygen saturation in venous blood (SvO2), Partial pressure of carbon dioxide (PaCO2), Partial pressure of oxygen (PaO2), Partial pressure of oxygen in venous blood (PvO2), Q1 (25th percentile), Q3 (75th percentile), SD (Standard deviation), Serum bicarbonate (HCO3), Serum Lactate (lactate), Venous oxygen content (CvO2), Venous partial pressure of CO2 (PvCO2)

The ventilation mode at the moment of measurement was Without MV (n = 32, 39.5%), MR (n = 2, 2.5%), HFNC (n = 5, 6.2%), Spontaneous (n = 5, 6.2%), CPAP|PS (n = 20, 24.7%), ACV (n = 17, 21.0%). Of the participants who were under IMV (CPAP|PS or ACV), the median PEEP value was 5 (IQR: 5 - 5.5) cmH2O; FiO2, 0.38 (IQR: 0.3 - 0.47); Pmax, 22 (IQR: 19.75 - 25); and mean Vt 377.9 (SD: 109). In those with the ACV mode, the median Pmes and DP were 22 (IQR: 16 - 23) and 14 (IQR: 12 - 17) cmH2O, respectively.

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