Preliminary results of multicenter registry of critically ill patients with acute kidney injury in Mexico: IRAM Registry

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Introduction

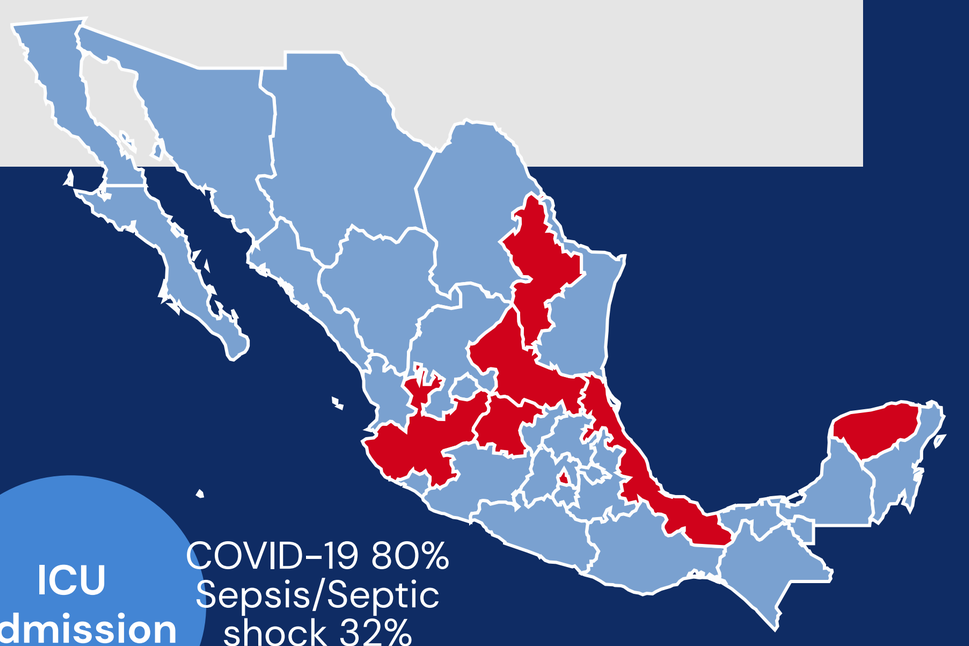
A reliable and objective source of information is required to measure the real magnitude that AKI and renal replacement therapy (RRT) represents in ICU. To our knowledge, there are no registries in Mexico of AKI and RRT

Aim

Here we present the preliminary results of IRAM Registry. The aims of IRAM Registry are estimate the prevalence of AKI with RRT requirements in Mexico teaching Critical Care Units, and to describe which and how are the most prescribed modalities

Study Design

Multicenter prospective registry, electronic platform password-protected
14 ICUs in Mexico through June 19th - December 4th, 2021



Characteristics of IRAM Registry population

n = 190
Age 53.6 (+-18.2)
38% 62%

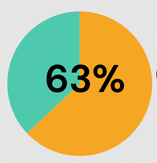
RRT Modality
IHD/PIRRT 56%
CRRT 36%
PD 16%

Co-morbilities
DM 47%
HAS 47%
CKD 17%
IHD 17%
CHF 10%

AKI etiology
Pre-renal 17%
ATN 76%
Post-renal 2%
Toxins 5%

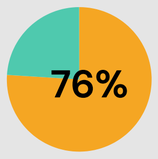
ICU Admission
COVID-19 80%
Sepsis/Septic shock 32%

RRT Initiation



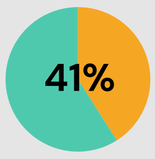
Dose
0.95 ± 0.20
mcg/kg/min

Norepinefrine

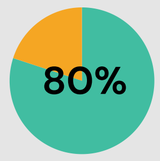


VC 80%
PC 20%
SIRA 79%
Prone 18%

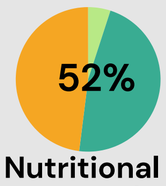
VMI



Diuretics



AB therapy



Nutritional support

Enteral 47%
Parenteral 5%

Urine output, ml/kg/hr	0.29 ± 0.41	SOFA score	10 (0-19)
Fluid balance, ml	3000 ± 3388	MAP mmHg	78 ± 11
Fluid overload, %	6.9 ± 0.82		

Hemoglobine g/dL	10 ± 2.3	Potassium, mEq/L	5 ± 1.2	Arterial pH	7.29 ± 0.12
Creatinine mg/dL	4.2 ± 2.9	Calcium, mg/dL	1.02 ± 0.87	Bicarbonate, mEq/L	17.7 ± 5.5
BUN mg/dL	90 ± 46	Phosphorus, mg/dL	6.3 ± 2.5	PaO2, mmHg	74 ± 27
Glucose, mg/dL	136 ± 73	Albumine, g/dL	2.4 ± 0.65	PaCO2, mmHg	37.9 ± 22.8
Sodium, mEq/L	138 ± 7				

Prescription characteristics

Prismaflex® preferred deviced (98.5%)
Preferred filter: Baxter® ST150 (85.4%)
Prescribed dose: 28.6 ±8.5 ml/kg/hr
Delivered dose: 24.3 ±4 ml/kg/hr
- Qb: 153 ml/min
- Qd: 1281 ml/min
- Non-anticoagulation: 62% Citrate: 31 % Heparine: 7%

Time: 203 min, 40% > 240 min (PIRRT)
- Qb: 317 ml/min
- Qd: 460 ml/min

Anticoagulation: Heparine (78%)

Outcomes

Mortality	RRT cessation	Discharge creatinine mg/dL	ICU lenght of stay, days	Increase in vasopressor	Achieved UF, ml
CRRT vs IHD/PIRRT 35% vs 65% *p* = 0.227	CRRT vs IHD/PIRRT 28% vs 72% *p* = 0.001	CRRT vs IHD/PIRRT 2.2 (±1.6) vs 3.3 (±2.7) *p* = 0.021	CRRT vs IHD/PIRRT 4.5 (±11) vs 3.4 (±7.5) *p* = 0.457	CRRT vs IHD/PIRRT 5.5% vs 33% *p* = 0.001	CRRT vs IHD/PIRRT 2239ml (±1130) vs 1720 (±1232) *p* = 0.001

Conclusion

In this preliminary analysis of the IRAM registry, the most prescribed modality in Mexican ICUs was IHD.
The prescribed dose of CRRT is within the recommended goals. As expected, the UF achieved was higher with CRRT and with a lower requirement of increased vasopressor during treatment.

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