

LETTERS TO THE EDITOR

Emergency-department-treated poisonings during home confinement for the COVID-19 pandemic*Intoxicaciones atendidas en urgencias durante el confinamiento por la pandemia del COVID-19***To the editor:**

As A. Juan states in his recent editorial, a pandemic has had to come to show us the weaknesses of a system that seemed to be solvent and to limit the hitherto unlimited: the healthcare supply¹. The restriction of freedoms represented by the containment measures decreed on March 14th was dictated precisely to avoid collapse, focusing maximum resources on the care of patients with coronavirus².

The scenario and the rules were, for once, clearly defined and the consequences did not take long to come. The demand for hospital emergency department (ED) visits fell by about 50% compared to the pre-pandemic period, as was the case in other countries³, and most of them were related to the pandemic, which greatly facilitated care and contributed to minimize the final consequences. Given this environment, it was expected that due to the limitation of activities that confinement represented, some of the reasons for visiting the ED related to outdoor activities or leisure, such as trauma, accidents or poisoning, would

be significantly reduced. Let us focus on the latter.

We found a decrease in intoxicated patients in the two emergency departments we represent, with toxicology units attached to them, almost identical to the rest of the emergencies attended in both centers, but a lower influx of intoxicated patients was still expected (Table 1). We assumed that the measures to limit mobility and the importance of the situation we were experiencing could especially affect patients with previous mental disorders⁴, which could increase the number of medical intakes for self-harm or anxiety-related purposes, as has been the case. The theoretical difficulties in obtaining a normal supply of illegal drugs, which has occurred (between 3.2% and 8.8%), made a decrease in recreational intoxications equally predictable; even so, recreational intoxications continue to outnumber suicidal ones during confinement (Table 1).

These results lead to other reflections such as the impact of these intoxicated patients in the out-of-hospital emergency services, which are particularly saturated at this time due to the need to reinforce and improvise other healthcare devices that have been created, combining this extraordinary activity with the initial attention of the rest of the emergency services. Proof of this is the notorious increase in transfers of intoxicated patients by ambulance in one of

the centers. The difficulty of effectively controlling the distribution of illegal drugs in society is also evident. We must also reflect on some ethical aspects that this profile of patients has and will have in our health system, or whether we should simply accept this reality and adapt ourselves definitively to it. Meanwhile, as emergency personnel, we will continue to focus on the pandemic and on minimizing its consequences, hoping for a return as soon as possible to the old reality, in which only soccer temporarily prevented the saturation of our services⁵.

Jordi Puiguriquer-Ferrando¹,
Emilio Salgado-García²,
Santiago Nogué-Xarau³

¹Toxicology Unit, Emergency Department, Son Espases University, Hospital, Palma de Mallorca, Spain.

²Toxicology Unit, Emergency Area, Hospital Clínic, Barcelona, Spain.

³Spanish Foundation of Clinical Toxicology, Spain.

jordi.puiguriquer@ssib.es

Conflicting interests: The authors declare that they have no conflict of interest in relation to the present article.

Contribution of the authors, funding and ethical responsibilities: The authors have confirmed their authorship, the non-existence of external funding and the maintenance of confidentiality and respect for patient rights in the author's responsibility document, publication agreement and assignment of rights to EMERGENCIAS.

Editor in charge: Guillermo Burillo Putze.

Article not commissioned by the Editorial Committee and with external peer review.

Table 1. Intoxicated patients treated in EDs during the first 43 days of confinement (March 14 to April 26, 2020), compared to the same dates in the previous 3 years

	Son Espases Hospital (Palma de Mallorca)			Hospital Clínic (Barcelona)		
	2017 - 2019	2020	Difference between both time periods	2017 - 2019	2020	Difference between both time periods
Total emergencies (daily average)	53,148 (412.0)	8,342 (194.0)	-52.9%	35,891 (278.2)	6,240 (145.1)	-47.8%
Total number of intoxicated people (daily average)	588 (4.6)	93 (2.2)	-52.2%	613 (4.8)	111 (2.6)	-45.8%
Intoxicated patients compared to total emergencies (%)	1.1	1.1	0%	1.7	1.8	+0.1%
Average age of intoxication (years)	39.7	43.6	+3.9	39.0	41.0	+2
Women intoxicated in annual average (% of total intoxicated)	76.6 (39.1)	35 (37.6)	-1.5%	86.7 (42.4)	40 (36.0)	-6.4%
Recreational intoxicated patients in annual average (% of total intoxicated)	120.6 (61.5)	49 (52.7)	-8.8%	117 (57.3)	60 (54.1)	-3.2%
Suicidal intoxications in annual average (% of total intoxicated)	38 (19.4)	29 (31.2)	+11.8%	53.3 (26.1)	34 (30.6)	+4.5%
Intoxicated patients arriving by ambulance (% of total intoxicated)	461 (78.4)	63 (67.7)	-10.7%	355 (57.9%)	99 (89.2)	+31.3%

References

- 1 Juan Pastor A. Un sistema sanitario contra un virus. *Emergencias*. 2020;32:152-4.
- 2 Real Decreto 463/2020, de 14 de marzo, por el que se declara el estado de alarma para la gestión de la situación de crisis sanitaria ocasionada por el COVID-19. BOE nº 67, de 14 marzo de 2020, Sec. I. Pág. 25390. (Consultado 15 Abril 2020). Disponible en: <https://www.boe.es/boe/dias/2020/03/14/pdfs/BOE-A-2020-3692.pdf>
- 3 Wee LE, Fua TP, Chua YY, Ho FWA, Sim X, Conceição EP, et al. Containing COVID-19 in the emergency room: the role of improved case detection and segregation of suspect cases. *Acad Emerg Med*. 2020 (en prensa). doi: 10.1111/acem.13984
- 4 Reger M, Stanley I, Joiner T. Suicide mortality and coronavirus Disease 2019. A perfect storm? *JAMA Psychiatry*. 2020 (en prensa). doi: 10.1001/jamapsychiatry.2020.1060
- 5 Ballesteros S, Fernández I, Vallejo G. Impacto de los partidos de fútbol en la frecuentación de pacientes a un servicio de urgencias. *Emergencias*. 2020 (en prensa).

Consensus on interhospital transfers during the COVID-19 pandemic

Consenso en el transporte interhospitalario ante la pandemia de COVID-19

To the editor:

Healthcare professionals are facing an unprecedented challenge in our environment. It has been only three months since the first cases of a new disease were described in Hubei Province, China¹, until the World Health Organization (WHO) declared a pandemic² and our health resources were overwhelmed. In this context, efforts have been multiplied to increase healthcare capacity in order to improve resource management³ and to implement contingency plans in all healthcare areas: emergency, primary care, hospitalization, intensive care, etc.⁴. The different healthcare areas have been affected in a heterogeneous and asynchronous way, which has led, especially in the first weeks of saturation, to a high number of inter-hospital transfers in order to redistribute patients. The use of other structures such as field hospitals and private centers has also made possible the distribution of patients.

The need to adopt uniform criteria and to adapt the prevention measures in the transmission of infec-

tions to the out-of-hospital environment led the Spanish Society of Emergency Medicine (SEMES) and the Spanish Society of Intensive and Critical Care Medicine and Coronary Units (SEMICYUC) to develop a joint document of recommendations for the inter-hospital transfer of patients in the context of the COVID-19 pandemic⁵. It highlights the figure of the health coordinator (HC) of the emergency and critical care coordination center (CCUE), to whom the intensive care units (ICU) and emergency services should have preferential or direct access, avoiding telephone delays in the care of other time-dependent pathologies. Depending on the patient's clinical situation - using the EWS scale for modified COVID-19⁶- and other factors, the risk of transfer will be assessed for the assignment of the most appropriate resource.

The document makes recommendations on the preparation of the vehicle and the patient in the unit of origin, especially useful in transfers that may be longer than usual due to the special characteristics of these patients: checking tubes and probes, limiting drugs in continuous infusion, availability of pre-filled drugs for transfer, etc. A differentiation is established between the member of the transfer team who will be in charge of the driving and those who will be in charge of the patient's care in order to limit the risk of contamination from the patient's care.

Reception, transfer and transfer suggestions include those related to changing respirators, both because of the clinical changes that can result in patients with severe respiratory compromise and high PEEP, and because of the risk of aerosol generation. Following these recommendations will reduce the number of adverse events and increase the safety of the patient and healthcare team. Finally, reference is made to the means of disinfection and some particularities of patient transfer with extracorporeal membrane oxygenation (ECMO) are noted.

We want to emphasize the necessary collaboration between scientific societies to give the best possible response to the welfare challenges we face. The elaboration of recommendations allows us to reduce the variability in clinical practice, which has a favorable impact on the prognosis of patients^{7,8}.

Alberto Hernández-Tejedor¹,
Ricardo Delgado Sánchez²

¹DAMUR-Operations Department-Civil Protection, Madrid, Spain.
²Emergency Management, Emergency and Sanitary Transportation. GUETS. SESCAM. Castilla-La Mancha. Emergency Secretary Co-ordinator. SEMES, Spain.
albertohmed@hotmail.com

Conflicting interests: The authors declare that they have no conflict of interest in relation to the present article.

Contribution of the authors, funding and ethical responsibilities: The authors have confirmed their authorship, the non-existence of external funding and the maintenance of confidentiality and respect for patient rights in the author's responsibility document, publication agreement and assignment of rights to EMERGENCIAS.

Editor in charge: Òscar Miró.

Article not commissioned by the Editorial Committee and with external peer review.

References

- 1 Wuhan seafood market pneumonia virus isolate Wuhan-Hu-1, complete genome. 23 de enero de 2020. (Consultado 21 Abril 2020). Disponible en: <http://www.ncbi.nlm.nih.gov/nucleotide/MN908947.3>
- 2 Organización Mundial de la Salud. Alocución de apertura del Director General de la OMS en la rueda de prensa sobre la COVID-19 celebrada el 11 de marzo de 2020 (consultado 21 Abril 2020). Disponible en: <https://www.who.int/es/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020>
- 3 Houzé-Cerfon CH, Boet S, Saint-Jean M, Cros J, Vardon-Bouines F, Marhar F, et al. Efecto de un debriefing (reunión informativa) combinado en los participantes en cursos de simulación interprofesional para la gestión de recursos de crisis: un estudio aleatorio, controlado y multicéntrico. *Emergencias*. 2020;32:111-7.
- 4 Rascado Sedes P, Ballesteros Sanz MA, Bodí Saera MA, Carrasco Rodríguez-Rey LF, Castellanos Ortega Á, Catalán González M, et al; Junta directiva de la SEMICYUC, Junta directiva de la SEEIUC. Plan de contingencia para los servicios de medicina intensiva frente a la pandemia COVID-19. *Med Intensiva* 2020 (en prensa). doi:10.1016/j.medint.2020.03.006
- 5 SEMES-SEMICYUC. Traslado interhospitalario ante la pandemia de COVID-19 (Consultado 21 Abril 2020). Disponible en: <https://www.semes.org/wp-content/uploads/2020/04/TH-COVID19-V1.pdf> y <https://semicyuc.org/wp-content/uploads/2020/04/TH-COVID19-V1-FINAL.pdf>
- 6 Liao X, Wang B, Kang Y. Novel coronavirus infection during the 2019-2020 epidemic: preparing intensive care units-the experience in Sichuan Province, China. *Intensive Care Med*. 2020;46:357-60.
- 7 Moreno Millán E. Variabilidad de la práctica clínica en la atención a urgencias y emergencias. *Emergencias* 2007;19:222-4.
- 8 Kostopoulou O, Wildman M. Sources of variability in uncertain medical decisions in the ICU: a process tracing study. *Qual Saf Health Care*. 2004;13:272-80.

Echocardiograms in patients with acute pericarditis

Echocardiograma en pacientes con pericarditis aguda

To the editor:

We have read with great interest the excellent article by Martínez-Nadal et al.¹ about the characteristics of pericarditis and myopericarditis diagnosed in 984 patients who came to the ED. We would like to focus on the echocardiographic alterations that these patients present. Although the authors state that Table 1 summarizes the demographic characteristics, comorbidities, parameters and clinical, electrocardiographic and ultrasound characteristics of the episode, this table does not provide any information on the number of echocardiograms performed or their results. In fact, the entire article does not specify the number of echocardiograms performed (or the number of echocardiograms performed). The only data provided by the authors in this sense is that, of the 72 patients with myopericarditis, 60 were performed. We believe that it would be highly advisable for the authors to provide this information for three reasons: I) clinical practice guidelines² recommend the performance of an echocardiogram for all patients with acute pericarditis (class I recommendation); II) the echocardiogram allows better selection of risk patients requiring hospital admission³; III) technological advances have made this imaging technique increasingly accessible⁴.

The authors conclude that their study reveals that the echocardiogram significantly conditions the decision to admit patients with myopericarditis to hospital and, therefore, it should be performed in the routine evaluation of patients with myopericarditis in the emergency departments. In our opinion, there is enough evidence in the literature to extend this recommendation to all patients with acute pericarditis.

Manuel Martínez-Selles
Cardiology Department, Gregorio Marañón
hospital, Madrid, Spain.
mmselles@secardiologia.es

Conflicting interests: The authors declare that they have no conflict of interest in relation to the present article.

Contribution of the authors, funding and ethical responsibilities: The authors have confirmed their authorship, the non-existence of external funding and the maintenance of confidentiality and respect for patient rights in the author's responsibility document, publication agreement and assignment of rights to EMERGENCIAS.

Editor in charge: Òscar Miró

Article not commissioned by the Editorial Board and with external peer review.

References

- Martínez-Nadal G, Prepoudis A, Miró Ò, Matas A, Cepas P, Aldea A, et al. Características clínicas de las pericarditis y miopericarditis diagnosticadas en urgencias y factores asociados con la necesidad de hospitalización. *Emergencias*. 2020;32:97-104.
- Adler Y, Charron P, Imazio M, Badano L, Barón-Esquivias G, Bogaert J, et al. 2015 ESC Guidelines for the diagnosis and management of pericardial diseases: The Task Force for the Diagnosis and Management of Pericardial Diseases of the European Society of Cardiology (ESC) Endorsed by: The European Association for Cardio-Thoracic Surgery (EACTS). *Eur Heart J*. 2015;36:2921-64.
- Imazio M, Gaita F, LeWinter M. Evaluation and treatment of pericarditis: a systematic review. *JAMA*. 2015;314:1498-506. Erratum in: *JAMA*. 2015;314:1978. *JAMA*. 2016;315:90.
- Acheampong B, Parra DA, Aliyu MH, Moon TD, Soslow JH. Smartphone interfaced handheld echocardiography for focused assessment of ventricular function and structure in children: A pilot study. *Echocardiography*. 2020;37:96-103.

Author's reply

Respuesta de los autores

To the editor:

We appreciate the interest shown in our work and the thoughts it has generated regarding the management of pericarditis (P) in emergency departments (EDs). Current clinical practice guidelines consider the echocardiogram to be a first-line examination in cases of suspected P (I-C recoding)^{1,2}. Echographic findings are part of their diagnostic criteria; they allow ruling out pericardial effusion (of special importance in the face of clinical diagnosis of cardiac tamponade) and alterations in contractility (of great interest if there is myocardial involvement). Only in special cases, without any other criteria of severity and without cardiomegaly in chest radiography, in centers without availability of ultrasound, it could be considered not to perform it³. Likewise, not only in the case of suspected involvement of the pericardium, but also in the

initial assessment of chest pain (CP) in the ED, the use of bedside ultrasound is suggested as a useful tool in differential diagnosis, especially in cases of hemodynamic instability and/or dyspnea⁴.

In our observational work⁵ we have had the opportunity to focus attention on the factors that influence the decision to admit patients with P and myopericarditis (MioP). The key role played by echocardiography in decision making has been observed in MioP episodes. Despite the great interest of the manuscript in describing a large number of episodes of P and MioP over a decade, one of the limitations already mentioned in its publication is that, as it is a retrospective study based on the diagnosis assigned by ED physicians to the ED discharge, information on all the variables to be studied is not available in the total number of patients. Despite not being the main objective of this work, at the request of the author of the letter, a review of the number of ultrasounds recorded in the ED discharge report of the total number of patients, which corresponds to 43% of the cases, has been carried out. We therefore appreciate the opportunity that your comments offer us to emphasize the growing role of ultrasound in recent years (thanks to improved accessibility to ultrasound scanners and greater training of ED physicians) in the ED for the assessment and management of multiple reasons for consultation, with the TD and, in particular, the suspected pathology of the pericardium being a good example.

Gemma Martínez-Nadal
Emergency Department, Hospital Clínic,
Barcelona, Spain.
gmartinez@clinic.cat

Conflicting interests: The author declares no conflict of interest in relation to this article.

Contribution of the authors, funding and ethical responsibilities: The authors have confirmed their authorship, the non-existence of external funding and the maintenance of confidentiality and respect for patient rights in the author's responsibility document, publication agreement and assignment of rights to EMERGENCIAS.

Editor in charge: Òscar Miró

Article not commissioned by the Editorial Board and with external peer review.

References

- Adler Y, Charron P, Imazio M. 2015 ESC Guidelines for the diagnosis and management of pericardial diseases: The Task Force

for the Diagnosis and Management of Pericardial Diseases of the European Society of Cardiology (ESC) Endorsed by: The European Association for Cardio-Thoracic Surgery. *Eur Heart J*. 2015;36:2921-64.

2 Klein AL, Abbara S, Agler DA. American Society of Echocardiography clinical recommendations for multimodality cardiovascular imaging of patients with pericardial disease: endorsed by the Society for Cardiovascular Magnetic Resonance and Society of Cardiovascular Computed Tomography. *J Am Soc Echocardiogr*. 2013;26:965-1012. e15.

3 Guindo J. Comments on the 2015 ESC Guidelines for the Diagnosis and Management of Pericardial Diseases. A Report by the Spanish Society of Cardiology Guidelines Committee Working Group. *Rev Esp Cardiol*. 2015;68:1068-74.

4 Via G, Hussain A, Wells M. International Evidence-Based Recommendations for Focused Cardiac Ultrasound. *J Am Soc Echocardiogr*. 2014;27:683.e1-683.e33.

5 Martínez-Nadal G, Prepoudis A, Miró Ò, Matas A, Cepas P, Aldea A, et al. Características clínicas de las pericarditis y miopericarditis diagnosticadas en urgencias y factores asociados con la necesidad de hospitalización. *Emergencias*. 2020;32:97-104.

Amphetamine and methamphetamine poisonings attended by emergency services: clinical characteristics and the usefulness of laboratory confirmation

Intoxicaciones por anfetamina y metanfetamina atendidas en los servicios de urgencias: características clínicas y utilidad de la confirmación analítica

To the editor:

I have read with great interest the article published by Ferrer et al.¹, and I wanted to provide some observations on the diagnosis and analytical confirmation of amphetamine and methamphetamine poisoning.

The authors have already mentioned that the techniques for detecting toxins in urine available in the emergency department have important limitations. A positive result must be carefully assessed, always taking into account other aetiologies of the symptomatology, since there are variables that it does not take into account such as the dose, whether the substances are for therapeutic or recreational use, whether the consumption is recent or old and the numerous false positives. Similarly, a negative result does not rule out the consumption of drugs or medicines, it

simply reports that the substances analyzed are not present in the urine, at least in concentrations above the cut-off point of the technique².

When the patient is identified as being intoxicated by amphetamine or methamphetamine, however, there is no specific antidote for these substances. The treatment of choice for amphetamine consists of supportive therapy, such as the administration of benzodiazepines and activated charcoal, with sedation, observation, and monitoring of the patient. An ECG should also be performed and in case of oliguria, the blood volume should be corrected³. In contrast, in cases of methamphetamine intoxication the combined treatment of benzodiazepines and antipsychotics gives good results⁴, but the treatment in the two cases of intoxication is similar, so their clinical differentiation, although useful, is not crucial in the ED. The only significant differences found in their study were greater presence of agitation in patients intoxicated by amphetamine and greater ECG performance in patients intoxicated by methamphetamine.

However, although some data from the study by Roset Ferrer et al.¹ could not become statistically significant, correlation between the described profile and methamphetamine use, such as chemsex, has been observed in numerous investigations. For example, the systematic review by Tomkins et al., which explored recreational drug use among men who have sex with men and high-risk sexual practices and sexually transmitted infections. Of the 112 studies included in the review, methamphetamines were the most used drug (39%)⁵.

In conclusion, there are not enough differences or clinical needs to differentiate methamphetamine and amphetamine intoxications. Moreover, the screening test is not sufficient evidence to distinguish between these two drugs. However, there is a clear profile of abuse that can help in diagnosing intoxication.

Wiktoria Aleksandra Zawadzka
Universidad de Barcelona, Barcelona, España.
wzawadza37@alumnes.ub.edu

Conflicting interests: The authors declare that they have no conflict of interest in relation to the present article.

Contribution of the authors, funding and ethical responsibilities: The authors have confirmed their authorship, the non-existence of external funding and the maintenance of confidentiality and respect for patient rights in the

author's responsibility document, publication agreement and assignment of rights to EMERGENCIAS.

Editor in charge: Òscar Miró

Article not commissioned by the Editorial Board and with external peer review.

References

- Roset Ferrer C, Gomila Muñiz I, Elorza Guerrero MA. Intoxicaciones por anfetamina y metanfetamina atendidas en los servicios de urgencias: características clínicas y utilidad de la confirmación analítica. *Emergencias*. 2020;32:26-32.
- Martínez-Sánchez L, Velasco-Rodríguez J. Valor del cribado toxicológico en orina en las sospechas de intoxicación en urgencias. *Anales de Pediatría Continuada*. 2010;8:139-43.
- Vasan S, Orango GJ. Amphetamine Toxicity. StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020.
- Richards JR, Laurin EG. Metamphetamine Toxicity. StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2019.
- Tomkins A, George R, Kliner M. Sexualised drug taking among men who have sex with men: A systematic review. *Perspectives in Public Health*. 2019;139:23-33.

Authors' reply

Respuesta de los autores

To the editor:

We appreciate the interest shown by Dr. Zawadzka in the critical reading of our article¹. It is true that the techniques for detecting toxins in urine available in the emergency departments (ED) are subject to numerous variables that must be considered in order to interpret them correctly. Sticking to the case of the application of amphetamine derivatives in urine, the laboratory can perform up to 3 different sequential tests to identify a complete profile of consumption. Understanding each one of them allows converting a presumed positive result into a clinically useful one².

Some of the results of our study did not reach statistical significance probably because of the sample size. However, during 2019 alone, 22 new cases of methamphetamine poisoning (MANF) were detected in our laboratory, compared to 34 published cases. These cases bring to light the publications of Burillo et al.³.

We also believe that there are enough differences between the two in their clinical presentation, previously published, so we should not dismiss the opportunity to differentiate them. Just to cite the most recent: MANF abuse is associated with the

development of psychotic symptoms, and allows us to differentiate a drug-induced psychosis from a persistent psychotic mental illness⁴. Ribas Barquet et al.⁵, in relation to dilated cardiomyopathy with ventricular dysfunction secondary to MANF use, highlighted that it is under-diagnosed. Pujol et al.⁶ concluded that early identification of patients with acute and serious cardiac complications secondary to MANF consumption is essential. Santuré et al.⁷ postulated that prolonged QTc (> 440 ms) could be a marker of suspected MANF use in patients with cardiovascular complications. Perelló et al.⁸ showed its high prevalence in HIV-positive patients attending an ED with signs of acute intoxication with a compatible chemsex profile. Fernandez et al.⁹ reported two cases of HIV-positive patients with suspected chemical dependence associated with chemsex, and in both cases the presence of MANF and up to five new psychoactive substances was confirmed.

For epidemiological and healthcare reasons, we believe it is advisable to perform a drug screening and subsequent confirmation for patients who come to the ED with signs of acute intoxication with serious clinical (acute psychotic or cardiovascular). And not only to identify the responsible toxicant, but also as a

source of information for subsequent outpatient management, especially when dealing with patients with clinical risk profiles of being amphetamine derivative users.

Bernardino
Barceló Martín,

en nombre de todos los autores

*Clinical Analysis Service,
Health Research Institute of The Balearic
Islands (IdISBa).
Son Espases University Hospital, Palma de
Mallorca, Spain.
bernardino.barcelo@ssib.es*

Conflicting interests: The authors declare that they have no conflict of interest in relation to the present article.

Contribution of the authors, funding and ethical responsibilities: The authors have confirmed their authorship, the non-existence of external funding and the maintenance of confidentiality and respect for patient rights in the author's responsibility document, publication agreement and assignment of rights to EMERGENCIAS.

Editor in charge: Òscar Miró

Article not commissioned by the Editorial Board and with external peer review.

References

- 1 Roset Ferrer C, Gomila Muñoz I, Elorza Guerrero MÁ, Puiguirguer Ferrando J, Leciñena Estean MÁ, Tuero León G, et al. Intoxicaciones por anfetamina y metanfetamina atendidas en los servicios de urgencias: características clínicas y utilidad de la confirmación analítica. *Emergencias*. 2020;32:26-32.
- 2 Hutcherson Wright A, Young JA, Smith BE, Saitman A. The Missing Metabolite: How Unexpected Urine Drug Metabolite Patterns May Lead to False Interpretations. *Clin Chem*. 2018;64:1291-3.
- 3 Burillo-Putze G, Matos Castro S. Los servicios de urgencias como atalaya de los patrones de uso de drogas y sus consecuencias clínicas. *Emergencias*. 2018;30:377-9.
- 4 Gan H, Zhao Y, Jiang H, Zhu Y, Chen T, Tan H, et al. A Research of Methamphetamine Induced Psychosis in 1,430 Individuals With Methamphetamine Use Disorder: Clinical Features and Possible Risk Factors. *Front Psychiatry*. 2018;9:551.
- 5 Ribas Barquet N, García-Ribas C, Caldentey Adrover GR, Giralt Borrell T, Belarte Tornero LC, Supervia Caparrós A, et al. Consecuencias cardiovasculares del consumo no-recreativo de shabú (clorhidrato de metanfetamina): nueve casos de miocardiopatía dilatada. *Emergencias*. 2020;32:213-5.
- 6 Pujol-López M, Ortega-Paz L, Roqué M, Bosch X. Severe Cardiac Complications of Shabu Use: An Emerging Drug in Europe. *Rev Esp Cardiol*. 2017;70:1014-6.
- 7 Santuré Sinfreu A, Buil Arasanz ME, Esparza Siegel L. Complicaciones cardiovasculares de las metanfetaminas: estudio de 6 casos. *Med Clin (Barc)*. 2019;153:e41-3.
- 8 Perelló R, Aused M, Saubí N, Quirós C, Blanco JL, Martínez-Rebollar M, et al. Intoxicación aguda por drogas de abuso en el paciente VIH: papel del chemsex. *Emergencias*. 2018;30:405-7.
- 9 Fernández Alonso C, Quintela Jorge Ó, Ayuso Tejedor S, Santiago-Sáez AE, González Armengol JJ. Intoxicación aguda por nuevas drogas de abuso en probables casos de sumisión química oportunista o mixta y chemsex en pacientes con VIH atendidos en urgencias. *Emergencias*. 2019;31:289-90.