

LETTERS TO THE EDITOR

Stings from jellyfish and other venomous marine life: impact on beach lifeguard services

Picaduras de medusas y otros animales marinos venenosos: su impacto en la actividad de los socorristas de playa

To the editor:

Bathing in the sea is a pleasant activity that is practiced more frequently in summer, but it is not free of risks. Among the risks are the bites of marine animals, some of which are poisonous¹. The objective of this study is to present the impact that jellyfish and other poisonous marine animals have on the set of requests for assistance to beach lifeguards in Catalonia.

For 3 years (2014-2016), lifeguards who provide their services in various municipalities of Catalonia have collected reasons why they have provided some kind of health care during the summer season on the beach. For each municipality, the

Jellyfish Sting Index (JSI) or quotient between the number of jellyfish stings observed and the rest of sanitary attention practiced by the lifeguards was calculated. Jellyfish sightings in the Catalan coast have been obtained through a database attached to the iMedJelly application designed by the Institute of Marine Sciences of Barcelona (www.icm.csic.es) within the framework of the MED-JELLYRISK projects and RECLAIMED and in collaboration with the coastal town councils of Catalonia and the rescue and first aid services.

Fourteen municipalities were included in the analysis, from which data were obtained in the three summers of the study (Table 1). Ten of them belong to the province of Barcelona and four to Girona, covering a total of 49 beaches. The surveillance of these beaches began mostly in mid-June and ended in mid-September (3 months). A total of 36,077 health activities were carried out during the three years, including care for wounds (32.7%), contusions (3.3%), burns (0.9%), lipothymias and sunstroke (0.7%) or rescues at sea (2.3%), among many other services. Attentions for stings of poisonous animals were 18,097 (50.2% of all attentions). Of these bites, 13,571 corresponded to jellyfish (75%), 1,761 to sea spiders (9.7%),

1,387 to sea urchins (7.7%) and 1,378 to animal bites not well identified (7.6%). The jellyfish that in 2016 were most frequently seen on Catalan beaches were *Rhizostoma pulmo* (55.8%), *Cotylorhiza tuberculata* (24.4%) and *Pelagia noctiluca* (18.9%), of which the most dangerous is the latter. The mean of the JSI has been calculated for each municipality. The beaches in which the highest index (0.56) of jellyfish stings was observed were of the municipality of Badalona (Barcelona), while the municipality with the lowest index (0.17) was Palamós (Girona).

The attention for jellyfish stings is the most frequent sanitary activity carried out by lifeguards on the beach in Catalonia. The figures presented make it possible to estimate that 25,000 jellyfish stings occur on the Catalan coast every summer. Although most cases are mild and resolve in hours or a few days, some stings can be severe and persistent in time² and even deadly in other latitudes³. The calculation of the JSI would also allow estimating the risk of sting depending on the species of jellyfish and investigate the factors that make certain days and beaches have high

Table 1. Health care provided by lifeguards on the beach in the 14 municipalities studied for 3 summers (2014-2016)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Mild incidents														
Jellyfish Sting	243	764	2,844	762	786	271	194	196	2106	324	1192	663	2418	808
Spider Fish Sting	248	125	7	9	2	5	0	3	23	3	618	85	358	275
Stinging sea urchin	2	346	429	324	3	5	9	2	55	22	11	4	57	118
Other bites	5	204	319	140	153	26	43	9	107	28	19	82	141	102
Minor injuries	80	2,251	3,388	1,689	319	163	132	93	904	402	405	217	1197	511
Bruises	20	119	321	102	43	20	19	11	144	27	41	91	116	103
Sun burn	0	31	73	25	3	2	2	6	31	13	9	24	29	20
Other burns	0	2	15	0	0	0	3	0	1	6	1	0	6	3
Headaches	4	4	2	4	1	0	0	0	2	0	2	0	3	0
Other minor incidents	8	256	407	164	63	52	43	17	169	53	122	11	217	141
Subtotal	610	4,192	7,805	3,219	1,373	544	445	337	3,542	908	2,420	1,277	4,542	2,081
Serious incidents														
Suffocation	3	0	0	1	1	0	0	0	1	1	0	3	9	0
Collapse	0	13	54	19	15	7	2	3	16	14	12	9	41	7
Insolation	1	6	6	2	2	0	1	2	0	0	0	0	6	0
Fracture	2	5	14	10	2	4	1	2	7	0	1	2	6	2
Heatstroke	0	2	1	0	0	1	0	0	0	0	0	0	4	0
Serious injury	1	4	3	4	4	2	0	0	5	1	0	0	7	1
Dislocations	2	3	16	8	7	2	1	0	11	2	0	2	5	2
Polytrauma	0	3	6	2	6	0	0	0	0	0	0	1	4	0
Cardiorespiratory arrest	2	1	9	1	2	0	0	0	1	0	4	0	4	1
Deaths	1	0	5	1	2	0	0	0	1	0	0	0	2	0
Other serious incidents	10	63	100	40	54	5	5	0	49	29	14	39	113	35
Subtotal	19	100	214	87	94	21	10	5	91	46	31	53	192	48
Other activities														
Rescues	27	45	180	80	36	3	8	0	32	32	52	34	254	47
Evacuated	13	45	109	72	50	13	7	9	51	17	60	47	110	28
Lost people	6	14	90	46	31	1	1	1	40	7	2	16	18	12
Subtotal	46	104	379	198	117	17	16	10	123	56	114	97	382	87
Total	678	4,369	8,398	3,505	1,585	582	471	359	3,756	1,011	2,565	1,430	5,125	2,216
JSI (Jellyfish sting index)	0.36	0.17	0.34	0.22	0.50	0.47	0.41	0.55	0.56	0.35	0.46	0.46	0.47	0.36

A: Sant Pere Pescador; B: Palamós; C: Lloret de Mar; D: Platja d'Aro; E: Calella; F: Cabrera de Mar; G: Sant Vicenç de Montalt; H: Vilassar de Mar; I: Badalona; J: Sant Adrià del Besòs; K: Castelldefels; L: El Prat de Llobregat; M: Sitges; N: Vilanova i la Geltrú.

JSI⁴. The data presented justify the need to maintain an adequate preparation for the care at the beach of these incidences, which can be as serious as cardiorespiratory arrest or as frequent as jellyfish stings⁵.

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Pharmacologic monitoring of acute confusional state in Spanish hospital emergency departments

Control farmacológico del cuadro confusional agudo (SCA) en servicios de urgencias hospitalarios españoles

To the editor:

We have read carefully the recently published article by Spain et al. in EMERGENCIAS¹, in which they give us their point of view on the pharmacological control performed in the acute confusional syndrome (ACS) in Australian hospital emergency services (HES). They consider that there is no universally accepted agent and that there is a wide variability, according to the availability of drugs. In their environment, droperidol and midazolam are considered the first-choice agent as a rescue in patients with ACS, mainly related to the consumption of toxins.

In this sense, we would like to give our point of view about the pharmacological control of ACS (delirium) in Spanish HES. Before that, we recognize that delirium is an underdiagnosed syndrome in HES² in the absence of a multidimensional assessment³. It is triggered by one or several organic problems and appears more frequently in frail elderly or at risk⁴.

After the failure of preventive measures, not pharmacological and etiological treatment, drugs are needed to control symptoms such as agitation, delusions and hallucinations that appear more frequently in the hyperactive or mixed delirium. None of them gather enough evidence, nor do they have any indication by the FDA, nor are there clear differences in terms of efficacy and safety. Despite this off-label prescription, neuroleptics (NLP) remain in our opinion the drugs of choice⁵.

Several authors consider NLP "atypical" as opposed to "classic" NLP, especially in elderly population, with high comorbidity or polypharmacy, for their greater safety. Despite this, any of them is not exempt from risks^{5,6}.

They are recommended at the lowest effective dose and for the shortest possible time. The route of administration is conditioned by the symptoms, and parenteral presentation or orodispersible forms are reserved for acute phase and oral route

for maintenance (Table 1). Then we made some consideration about the NLP of greatest interest for the emergency doctors in Spain at the present time⁵⁻⁷:

Among the "classic" NLP, haloperidol is the most studied drug, available by multiple routes and of choice in young patients for its potency, without excessive sedative, anticholinergic or hypotensive effect. On the other hand, at high doses (> 4.5 mg) it can cause fatal arrhythmias and extrapyramidal symptoms (parkinsonism, dystonia and akathisia). Unlike Spain et al.¹, we have no experience with droperidol. In Spain is authorized only to prevent postoperative nausea and vomiting. Thiapride is another option, especially in patients with insufficiency hepatic or respiratory, although with less sedative power than the previous ones. Recently, loxapine powder has been commercialized to be inhaled, with no experience in delirium or in the elderly⁸.

Among the "atypical" NLPs, risperidone is probably the most studied, recommended in patients

with cognitive impairment and well tolerated in the elderly at low doses. Olanzapine is recommended in young and oncological patients, which has sedative power and long-term risk of metabolic syndrome. In patients with Parkinson's disease and other rigid-akinetic syndromes quetiapine is recommended. Ziprasidone is an alternative to the previous ones, with good safety profile at low doses without forgetting that cases of imbalance have been detected electrolyte, hypotension and arrhythmias. Aripiprazole is a drug with a "dopaminergic stabilizing effect", useful in hypoactive delirium, without known serious side effects, available as the previous one orally and intramuscularly⁹.

Benzodiazepines are second-line drugs. Like Spain et al.¹, we consider that midazolam is the best option because of its short half-life, preferably intramuscular, buccal or nasal. Lorazepam would be the best alternative, but we do not have parenteral formulation. In *delirium tremens* and in the alcohol withdrawal syndrome, they are recommended in the first line, and dipotassium clorazepate or diazepam is usually used intravenously¹⁰.

We have no record to date of experiences with ketamine in hyperactive delirium, nor with methylphenida-

Table 1. Recommended neuroleptics in patients with acute confusional syndrome or delirium in Spanish hospital emergency services

Neuroleptic	Active principle	Presentation	Route admón.	Initial dose of attack and maintenance	Máx. dose/day*
"Typical"	Haloperidol	Vial 5 m/1 ml Tablet 10 mg 0.1. mg/drop	IM, SBC, IV, O	0.5-5 mg, repeat in 0.5-2 h 0.5-2 mg/8-12 h	5-10 mg 15 mg
	Tiapride	Amp. 100 mg/2 ml Tablet. 100 mg, 0.5 mg/gota	IM, IV, O, VO	50-100 mg, repetir en 0.5-2 h 100-200 mg/8 h	400 mg 600 mg
	Loxapine	9,1 inhaled powder	INH	4.5-9.1 mg, repetir dosis en 2 h	18.2 mg
"Atypical"	Risperidone	Orodisp. 0.5,1,2,3,4, mg Tablet. 0.5, 1, 2, 3, 6, Sol 1 mg/ml	VO	0.5-1 mg. repetir en 0.5-2 h 0.25-1 mg/12 h	4-6 mg 400 mg
	Quetiapine	Tablet. 25, 100, 200, 300	VO	12.5-25/12 h	400 mg
	Olanzapine	Amp. 10 mg/2 ml Bucodisp. 5, 10 mg Tablet. 2.5, 5, 7, 5, 10 mg	IM VO	2.5-5 mg, Repeat in 2-4 h 5 mg, Repeat in 0.5-2 h 2.5-5 mg/24 h (noche)	10 mg 20 mg
	Ziprasidone	Amp. 20 mg/1 ml Tablet. 20, 40, 60, 80	IM VO	5-20 mg, Repeat in 2-4 h 10-20 mg/12 h	40 mg 160 mg
	Aripiprazole	Amp. 7.5/1.3 ml Tablet. 5, 10, 15; Sol 1 mg/ml	IM VO	5.25-9.75 mg, Repeat in 2-4 h 5-10 mg/24 h	30 mg 30 mg

IM: Intramuscular injection; IV: Intravenous; SBC: Subcutaneous; INH: Inhaled; O: Oral; SL: Sublingual; Vial, Tablets; Orodisp.: Orodispersible; Sol: Solution

*Approximate maximum dose; in elderly, it is recommended half of dose

te in the hypoactive. Neither do we have sufficient evidence to recommend primary delirium prophylaxis with psychotropic drugs in patients with dementia.

Even recognizing that recruitment may be difficult, it would be convenient to conduct clinical trials, with the objective of identifying which drugs are safe and effective for ACS in the field of Emergency and Emergency Medicine, and in which patient profile.

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Segmental arterial mediolysis

Mediolisis arterial segmentaria

To the editor:

Segmental arterial mediolysis (SAM) is a non-atherosclerotic and no inflammatory arteriopathy of unknown etiology. It consists of a dysplasia with vacuolization and lysis of the arterial middle layer. It can progress to dissection, stenosis, occlusion and aneurysm formation. Its prevalence is underestimated due to the subclinical presentation and the scarce use of angio-CT in the study of abdominal pain^{1,2}.

A 44-year-old woman with a history of cholecystectomy. He consulted, for the third time in a week, for epigastric abdominal pain with lumbar irradiation, hyporexia and loss of 2 kg in weight, which had not improved with analgesics and gastric protector. On physical examination, he was hemodynamically stable, afebrile, with pain on palpation in the epigastrium and right hypochondrium, without signs of peritoneal irritation. The analytical showed a hepatic cytolytic pattern, without elevation of acute phase reactants (biochemistry: alkaline phosphatase 65 U/L, LDH 200 U/L, total bilirubin 0.30 mg/dL, GPT 161 U/L, GOT 71 U/L, GGT 70 U/L, alpha-amylase 40 U/L, PCR 4.40 mg/L; blood count: leukocytes 10 x 10³/μL, haemoglobin 13.1 g/dL, platelets



Figure 1. Thoracoabdominal CT angiography, in which a saccular aneurysm is visualized (arrow).

239 x 10³/μL; coagulation: prothrombin time 10.88 seconds, prothrombin activity 99.67%, INR 0.99, aPTT 26.73 seconds, fibrinogen derivative 450.10 mg/dL). An urgent abdominal ultrasound was requested, which revealed a thickening of the celiac trunk wall, the common hepatic artery and the hepatic artery itself. The study was completed with an angio-CT, which showed a cuff around the celiac trunk, common and self-hepatic artery; stenotic arterial segments in the celiac trunk and the right hepatic artery, and a saccular aneurysm (Figure 1). The serological and immunological tests were negative. Given the small dimensions of the aneurysm and the low risk of haemorrhage, therapeutic management was conservative, initiating antiaggregation. The control angio-CT at one month showed a reduction of the aneurysm.

SAM occurs between the fourth and sixth decades of life and its clinical expression is varied. Abdominal pain predominates (66%) and hemodynamic instability (29%)³. It mainly affects the abdominal visceral arteries. The diagnosis is based on angio-CT; and histological confirmation is not essential². The differential diagnosis is with systemic vasculitis is essential; since the use of corticosteroids and immunosuppressants in SAM is contraindicated due to the risk of iatrogenic sepsis⁴. The therapeutic approach is determined by the severity. Hemodynamic involvement requires early endovascular or surgical management. In case of stability, it is possible to opt for medical treatment (antihypertensive and antiplatelet therapy)^{2,5} or expectant, since it is occasionally self-limiting. Mortality, which reached 50% in the past, has experienced a decrease thanks to the improvement of radiological tests and endovascular proce-

dures³. We conclude that SAM is a potentially fatal entity, and although the diagnosis in the emergency department is complicated, clinical suspicion must indicate the performance of a CT angiography.

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Comments on the SEMICA study (Emergency Medical Response Systems for Patients with Acute Heart Failure)

Comentarios sobre el estudio SEMICA

To the editor:

We have read with enthusiasm the SEMICA study of Dr. Miró et al. Since it allows reflection to optimize the quality of our care. However, we would like to make several comments based on two aspects: the bibliography published on the dates in which the data were collected and the specific conditions of the prehospital stage in the care of patients with acute heart failure (AHF).

On the one hand, the basis of an optimal treatment is the correct diagnosis of the present pathology. In the case of the AHF, it is purely clinical. However, the signs and symptoms are not specific to it. To this we must add that, on occasion, pre-office emergency services (P-HES) do not have information on the background or chronic medications of the patient that can guide us towards it. This can hinder this diagnosis, especially in the more initial stage of the syndrome, at which time the SEM-P assess these patients. In addition, at that time, some emergency medical units (EMUs) lacked tools that complemented the diagnosis, such as echocardiography or routine analysis (IC recommendations) and, of course, neither chest radiography or determination of peptides, natriuretics (recommendation IIa-C)¹. Evidence that we do not know if they were performed by the SEM-P analysed, but that instead were available during their attention in the emergency department as published by Llorens et al.².

In relation to the treatments described, we agree with the thesis of the editorial of Harjola and Harjola³, who advocate a restriction of oxygen therapy in patients in whom it is not indicated. More worrying and interesting are the data on the under treatment with diuretics, since they constitute the cornerstone in the relief of congestive symptoms and the volume overload that these patients present, and their early administration could be decisive in the prognosis, as recently published Matsue et al.⁴. The source of prehospital care data collection is not described. However, in our practice and environment, it is the doctor of the health centre who sometimes activates the EMUs, having already prescribed both the oxygen and the diuretic on our arrival and may not appear in our report.

In relation to the use of non-invasive mechanical ventilation (NIMV) in

the AHF, although at the moment we think its basic use, it was controversial in the years in which the data were collected, so that the AHF management guidelines of the AHA of 2013⁵ did not pick up its use and the European ones relegated it to a possible symptomatic management class IIA, level of evidence B. This could partially justify the results obtained not only in this article but also, in the low rates of nosocomial NIMV Llorens study².

Our recent group wants to congratulate you and thank you for your work in this field since we have much to do in view of the pre-hospital and hospital results. We hope to provide more light soon with the results of the studies we are developing.

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Authors' reply

Respuesta de los autores

To the editor:

We appreciate the comments made about our SEMICA¹ study and we proceed to clarify the aspects that Viejo-Moreno et al. they formulate us. First, we share their opinion, expressed also in other recent studies^{2,3}, that the diagnosis and early treatment of acute heart failure (AHF) in general, and the administration of intravenous diuretics in particular, are fundamental aspects to achieve better results. than those obtained to date. In fact, the initial results of the SEMICA-2 study that we are finalizing also point in this direction: early and intense treatment could lead to a better prognosis.

Therefore, the role played by medical emergency services (MES) in the prehospital setting will be essential to achieve this improvement. The data that we have contributed in the SEMICA study are based on the medical care sheet provided by the MES that transferred patients to the participating hospitals in the EAHFE Registry, which has been described in depth in previous works^{4,5}. Obviously, at the time of prehospital care, most often due to dyspnoea and oedema, the care team could not be certain of the diagnosis of AHF, and this may have motivated the low use of diuretics in these patients. We must admit that the patient may have received intravenous diuretics in the health centre prior to contact with the MES, but the percentage of cases in which this happened is unknown, since it was not recorded in the data collection form. Therefore, this reason may

justify to a certain degree this perception of under treatment with diuretics registered by the SEMICA study. Future studies or records should elucidate it.

Finally, regarding the use of non-invasive ventilation (NIV) by the MES, the authors are correct that their incorporation into the MES is more recent and has been the subject of controversy for some time⁶. The lack of congruence between the current guidelines to which the authors allude is a clear example of this controversy. Therefore, it is in this scenario that the low use of NIV is still understandable today by the advanced life support teams, 4.7%, which has been registered by the SEMICA study. All these data simply show that there are areas for improvement in terms of administering treatment to patients with AHF as early as possible. But prehospital care is only a phase in the continuum of care for urgent treatment. Hospital emergency services, with greater diagnostic and therapeutic resources and a more favourable environment, also present clearly improvable results: the risk of revisiting to emergencies or the need for hospitalization for the patient discharged directly from the emergency room during the 30 days following discharge. , compared with the patient discharged after hospitalization and after adjusting for their different clinical profiles, is increased by 45%, and this increase in risk reaches 137% if we circumscribe 7 days after discharge^{7,8}. Another example: the preferential use of morphine to treat the anxiety associated with the most severe episodes of AHF, which is common in both scenarios (prehospital and hospital), conditions a worse prognosis for these patients⁹. Therefore, we believe that the proposal of the authors to delve into the causes and possible solutions to all this, in order to obtain better final results, is more justified than ever.

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Gastric foreign body-induced hematemesis in a body packer

Hematemesis secundaria a cuerpo extraño gástrico en un body packer

To the editor:

People who transport drugs inside their bodies are known as mules, bolearos or body packers. They usually carry cocaine, heroin, hashish or methamphetamine. In general, conservative treatment is performed until all drug packages are expelled^{1,2}. Surgical treatment is indicated if complications appear^{1,2}. The performance of an upper gastrointestinal endoscopy (upper GI) for the extraction of packages lodged in the stomach is not recommended because of the danger of rupture³. We present the case of a patient who consulted for hematemesis secondary to a pressure ulcer of a foreign body that was extracted by upper GI.

A 37-year-old male, a multi-drug addict, who consulted for epigastric abdominal pain of 4 days of evolution and episode of hematemesis the previous day. He reported the intake of three "hashish acorns" 3 months ago, he recalled having expelled 2 of them. The scan showed: blood pressure 128/79 mm Hg, heart rate 79 bpm and saturation of 99% breathing room air. The abdomen was soft, depressible, painful on palpation in the epigastrium, with increased peristalsis and without signs of peritoneal irritation. The analytical showed no alterations except a haemoglobin of 10.9 g/dL. The abdomen radiograph showed an oval body in the left upper quadrant (Figure 1a) that was confirmed by tomography computerized. Given the history of hematemesis, perfu-

sion of omeprazole was initiated and an upper GI was performed that identified a brownish oval foreign body with a stony consistency of 5.5 x 2.5 cm housed in the gastric fundus (Figure 1b). During the endoscopic procedure, it was decided to remove it with an SnapeMaster SD-210U-25 polypectomy loop from Olympus Medical® (Tokyo, Japan), which was performed without complications. After this a gastric ulcer was identified, probably by decubitus, in the angular incisura, with regular edges and 7 mm maximum diameter, with fibrin base and hematine point (Figure 1c). The patient remained asymptomatic, and was discharged after a few hours of observation.

Before a body packer, conservative treatment^{1,2} should be performed, even in the case of packs located in the stomach for more than 48 hours⁴. Surgery should be reserved for cases of complications or when the progression of the bowel packs is not achieved¹⁻³, which occurs on a few occasions². In our case, the indication for upper GI was made due to the presence of hematemesis. The stony consistency of the package, the long period of time it had in the gastric cavity and the nature of the drug other than heroin or cocaine made the decision to attempt its extraction via endoscopy and not indicate surgery. In addition, the upper GI allowed to visualize an ulcer by decubitus, a fact described in few

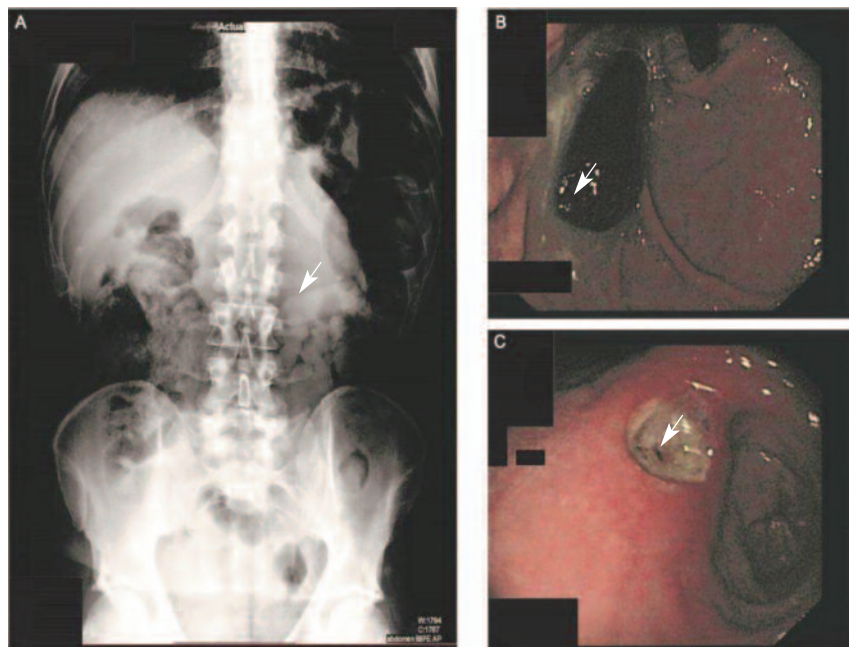


Figure 1. A) Simple abdominal x-ray showing an oval object in the upper left quadrant (arrow). B) Upper digestive endoscopy: oval foreign body in gastric fundus (arrow). C) Gastric ulcer at the level of angular incisura with regular edges and 7 mm maximum diameter (arrow).

ocasiones⁵. In conclusion, the upper GI is not recommended for the extraction of drug packages, but in exceptional cases such as the one presented (long evolution, single package, hematemesis and drug other than heroin, cocaine or methamphetamine, whose risk of rupture could trigger complications fatal) and performed by an expert endoscopist, could have their indications.

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Usefulness of bedside ultrasound in body packer syndrome

Utilidad de la ecografía a pie de cama en el body packer

To the editor:

In recent decades, the transport of drugs inside the body, known in English as "body-packer" (BP), has been increasing, seriously influenced by the economic situation. This not only entails serious legal implications, but also represents an important diagnostic challenge, which can lead to serious complications, if not detected in time.

A 40-year-old male, a habitual consumer of alcohol and cannabis, who went to the emergency room for diffuse abdominal pain, nausea, constipation and palpitations for 2 days. The patient presented intense diffuse abdominal pain (EVA 9/10), psychomotor agitation and diaphoresis. The blood pressure was 158/100 mmHg, heart rate 79 bpm, respiratory rate 19 rpm and pulse oximetry 100% (ambient air), the rest of the physical examination was normal. In the analysis, the following were highlighted: leukocytes $24 \times 10^9/L$ (84% neutrophils), platelets $379 \times 10^9/L$, pH 7.60, bicarbonate 28 mmol/L, pCO_2 28.5 mmHg and base excess 6.9 mmol/L (VN: -2.7--2.5). An abdominal x-ray was done that did not show interesting findings. At that time, it was decided to perform an ultrasound at the foot of the bed that showed dilated bowel loops, with back and forth movement of the contents and presence of fluid between the loops, which was a diagnosis of intestinal obstruction. After re-interrogating the patient, he recognized the previous consumption of 4 cannabis balls. An abdominal computed tomography (CT) scan was performed to locate the exact packs, finding two in the distal ileum, one in the proximal ileum and one in the gastric antrum before the pylorus. We proceeded to clinical stabilization, with a conservative attitude, after objectifying a clinical improvement with analgesia of the first step, benzodiazepines and fluid therapy. The patient expelled 3 packages of intact cannabis, and in a second time he needed a gastroscopy to extract the remaining package in stomach (4 cm in diameter), also intact. The patient evolved favourably and was discharged 7 days after admission, without subsequent complications.

Spain is an important gateway for European drug trafficking, mainly from South America and North Africa. The term BP is used to designate the use of the body, specifically the digestive tract, for the transport of drugs. It was first described in 1973. The usual way is by eating small packages that

usually contain cocaine, heroin or cannabis wrapped in several layers of cellophane, rubber, latex, aluminium foil or electrical tape, which poses a high risk of breakage. It can seriously compromise the health of the person.

The clinical manifestation may be due to intestinal obstruction or intoxication due to the content. The intestinal occlusion is frequently located in the pylorus and ileocecal valve, and produces gastrointestinal discomfort, peritonitis or septic shock¹. In terms of intoxication, the clinical symptoms and their severity are directly proportional to the type and amount of drug absorbed. To be produced, it is not necessary that the package be broken, because due to the semipermeable layers of the wrapper, it is possible to spread it outwards, which can produce intoxications even with the package intact, as in our case. Cannabis is the illegal drug most consumed in Spain. The clinic can be very varied, with oral absorption (5-10%) less than inhaled (30-50%). Its effect starts after a few minutes and can last up to five hours. It produces neurovegetative, respiratory or cardiovascular manifestations.

The treatment in both cases is based on the hemodynamic support (there is no antidote), the surgical removal of the packages and the resolution of the complications that appear. For its diagnosis, simple abdominal radiography is used, with a sensitivity of 46.2%². Therefore, when there is a high clinical suspicion and normal radiography, as in our case, it is necessary to perform other imaging tests such as CT or ultrasound^{2,3}, which increase this sensitivity to 97.7%³. That is why some authors^{4,5} propose abdominal ultrasound as a method of screening (before abdominal radiography), for its speed, low cost, absence of irradiation and availability in almost all emergency services. However, there is considerable controversy regarding its usefulness in the visualization of foreign bodies, due to its disposition inside bowel loops and poor visualization due to intestinal gas.

The growing number of cases of BP in the Spanish emergency services, encouraged by the economic crisis of recent years, is a diagnostic and therapeutic challenge for healthcare professionals, especially due to the complications that delay in diagnosis can cause. Therefore, it is necessary to look for quick and accessible methods

at the doctor's hand emergencies, such as ultrasound at the foot of the bed, to establish an early treatment and thus avoid the complications of late diagnosis

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Morel-Lavallée lesions the importance of early diagnosis

Lesión de Morel-Lavallée: la importancia del diagnóstico precoz

To the editor:

The lesion of Morel-Lavallée (LML) is a closed avulsion produced by a shear mechanism that separates the skin and subcutaneous tissue from the underlying fascia, leaving a space that is filled with blood, lymph and liquefiable fat. The term comes from the physician Maurice Morel-Lavallée, who described it for the first time^{1,2}. It usually occurs in the proximal thigh or the gluteus and high-energy trauma is the most common cause. The doctor's suspicion is fundamental for its diagnosis.

A 26-year-old man who came to the emergency room after a motorcycle accident. He had no personal history of inte-

rest, except for a body mass index (BMI) of 52 kg m². The examination revealed skin abrasions and ecchymosis of the thigh and buttocks. The laboratory results showed a haemoglobin of 10.2 mg/dL. X-rays and computed tomography (CT) showed fractures of the humerus and transverse process of the fourth lumbar vertebra (L4) and a subcutaneous hematoma of 25 x 25 x 10 cm from the greater trochanter to the left gluteus. After the initial stabilization, he was admitted for the treatment of the humeral fracture. During his stay, he developed massive skin necrosis in the lumbar area. On the tenth day of admission, surgical debridement and drainage of 12 litres of serosanguinous fluid was performed, but a cutaneous defect of 30 x 40 cm remained. After 4 months admitted and multiple interventions, it was possible to seal the defect by combining direct closure with skin grafts.

In this type of closed lesions, the survival of the overlying skin depends exclusively on the subdermal plexus. Therefore, the sustained compression exerted by the collection against the skin flap can compromise its viability and cause cutaneous necrosis, as happened in this case. While open avulsion lesions are frequently associated with bone fractures, when there is no continuity solution it is rare to find hidden lesions³. In fact, it is believed that almost one third of these injuries go unnoticed or are diagnosed late⁴. The coexistence of critical lesions and the apparent benign appearance of ecchymosis may play a role in the omission of the diagnosis. Due to the low incidence of closed lesions of degloving and to the instability of the patient in the acute moment,

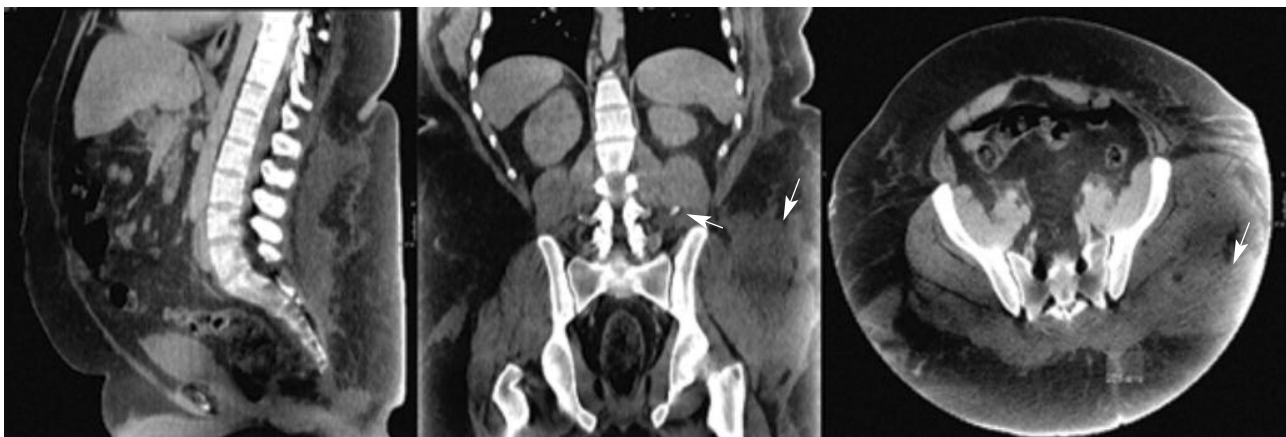


Figure 1. Images obtained by computed tomography (CT) of the closed degloving lesion in the lumbar area. The CT scan shows a collection of soft tissues in the subcutaneous tissue around the left major trochanter and the lumbar region (arrows), accompanied by a displaced transverse process fracture of L4 (arrow).

the attention was focused on the most serious injuries, and the LML was left aside. Abrasions, burns and ecchymosis are some of the clues to detect hidden injuries. Simple radiology does not provide information and magnetic resonance is the diagnostic test of choice. There are approved protocols for the treatment of open lesions, but consensus in closed lesions is far from being achieved⁵. On this occasion, the characteristics of the lesion and extensive skin necrosis required a very aggressive approach.

We describe the largest case of closed degloving reported to date with the intention of highlighting this entity. After the control of life-threatening injuries in victims of traffic accidents, special attention should be paid to soft-tissue injuries to diagnose and treat them early. The suspicion of the emergency doctor is cru-

cial to prevent their potential morbidity.

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