

Intracardiac Sewing Needle in a Woman With Autoaggressive Behavior

To the Editor:

Heart lesions produced by the introduction of sewing needles into the thorax by people with autoaggressive behavior patterns are very rare.¹⁻⁴ Such patients usually suffer psychiatric disorders and present at hospital manifesting that they have introduced a foreign object into their chest, or with chest pain, dyspnea and sometimes pneumothorax. We recently treated a female drug addict with psychiatric problems who had managed to introduce a sewing needle into the myocardium. The migration of such objects into the heart chambers can cause intramural hematomas, tamponade, infection, embolism, valve dysfunction and death, and their extraction is recommended.^{3,4}

The present patient was 44 years old, had a background of schizophrenia and drug abuse, and had been institutionalized after a suicide attempt. She was admitted to our hospital after having inserted a sewing needle into the precordium. She complained of pain in the fifth midclavicular intercostal space, where an area of ecchymosis was visible. A physical examination showed several scars on the left arm. Radioscopy revealed a metallic object that moved with the cardiac silhouette. Echocardiography and computed tomography showed a needle to be lodged in the heart (Figure 1).

Since the patient was hemodynamically stable, videothoroscopic exploration and extraction of the object was attempted, but this proved fruitless. Given the risk of migration and tamponade it was decided to undertake direct surgery. Following sternotomy, a hematoma was noticed on the back side of the left hemithorax and in the pericardial fat. Following pericardiotomy, a small serohematic hemorrhage and granuloma were seen on the anterior face of the left ventricle close to the left descending coronary artery. The remainder of the heart and the pericardial cavity were normal. Intraoperative radioscopy showed the needle to be in the left ventricle. The granuloma was explored, positioning the heart with a stabilizer (Octopus®). The dissection of the beating heart proved unfruitful, and given the danger of perforating the left ventricle the decision was made to continue with extracorporeal circulation and cardioplegic arrest. Figure 2 shows the dissection of the granuloma and the extraction of a 7 cm long sewing needle (this needle was completely within the myocardium; the figure shows it partially extracted). Ventricular closure was performed with 2 Teflon patches. The patient progressed satisfactorily with no complications.

Heart lesions caused by the introduction of pins or needles in an attempt to inflict self-injury have been described only on very few occasions. Such self-mutilatory behavior has been observed in patients with schizophrenia, depression, and in the mentally disabled. As in the present case, drug or alcohol abuse increases the probability of such behavior. In published cases, these needles have been found



Figure 1. Tomographic image of the needle inside the heart.



Figure 2. Extraction of the needle following left ventriculotomy after the establishment of extracorporeal circulation.

free in the pericardial cavity or in the left ventricle, extraction being performed with or without extracorporeal circulation as required.^{1,5} Although some authors have suggested that these objects might be removed by performing a small anterior thoracotomy without the help of extracorporeal circulation,⁵ in the present case, conventional midline sternotomy was decided upon following the failure of thoracoscopy. Intraoperative radioscopy was successful in finding the end of the needle, thus showing where ventriculotomy was required.

Raúl A. Borracci, Arnaldo P. Milani,
and Rodolfo A. Ahuad Guerrero

Departamento de Cardiología y Cirugía Cardíaca,
Corporación Médica de General San Martín,
San Martín, Buenos Aires, Argentina.

REFERENCES

1. Sarmiento-Leite R, Silva GV, Goulart LC, Perin EC. A sewing needle in the right ventricle. *Tex Heart J*. 2000;27:314-5.
2. Kim KH, Ahn H. Intracardiac foreign body: a sewing needle in the right ventricle. *Eur J Cardiothorac Surg*. 2001;19:513.
3. Inoue T, Lemura J, Saga T. Delayed cardiac tamponade caused by self-inserted needles. *Can J Cardiol*. 2003;19:306-8.
4. Rossi MA, Alvarenga DG, Agizzi RS. Sewing needle transfixing the posterior wall of the left ventricle causes death. *Circulation*. 1999;99:843-4.
5. Sayin AG, Besirli K, Arslan C, Canturk E. A case of intramyocardial sewing needle extracted without stopping the heart. *Injury*. 2002;33:276-7.

Vacuum-Assisted Therapy for Mediastinitis After Heart Transplantation

To the Editor:

In our heart transplant patients, postoperative mediastinitis is uncommon (1.4%), but when it does occur it is associated with very high mortality (42%). Its treatment is complex: immunosuppression needs to be temporarily suspended, and the patient usually has to be reintubated due to sternal instability.

Vacuum assisted closure (VAC) was first used in 1997 in plastic surgery, and the results were spectacular. We successfully used this technique in a 52 year-old man following surgical debridement to treat post-transplant mediastinitis (Figure, A). The system used (VAC[®], KCI Clinic Spain, S.L.) involves placing a polyurethane sponge in the chest wound and covering it with a plastic adhesive (Figure, B). The area is then hermetically connected to a continuous aspiration system (Figure, C). The sponge is changed every 48 h. The negative pressure developed must be between 125 and 200 mm Hg; lower pressures are inef-



Figure. A: mediastinitis: acute phase. B: the vacuum assisted closure system in place. C: continuous aspiration apparatus. D: granulation phase 5 days after vacuum assisted closure. E: definitive cure 40 days later.

ficient while higher pressures can provoke cardiac tamponade.

The advantages of this technique, which render it the closure method of choice in transplant patients, include the rapid induction of granulation and angiogenesis, rapid control of the infection (Figure, D) (which allows immunosuppression to be quickly reestablished), and the provision of great sternal stability. The latter facilitates extubation (Figure, B) and the mobilization of the patient during treatment. In the present case the technique provided a bridge until plasty of the left major pectoral muscle (inversion), which was performed 5 days later. A definitive cure was achieved (Figure, E).

Evaristo Castedo,^a Emilio Monguió,^a
Juan Ugarte,^a and Eugenio Lalinde^b

^aDepartamento de Cirugía Cardiovascular, Clínica Puerta de Hierro, Madrid, Spain. ^bCirugía Plástica, Clínica Puerta de Hierro, Madrid, Spain.

Invasive Treatment of Non-ST-Segment Elevation Acute Coronary Syndrome: Is There More Than One Real World?

To the Editor:

We have read with great interest Bodí et al's recent original article¹ drawing us closer to the real world of non-ST elevation acute coronary syndrome (NSTEMI ACS). However, it should not be forgotten that the authors belong to a research team with great interest and a long tradition in the stratification of NSTEMI ACS,² that they work in a university hospital with a cardiac catheterization laboratory and that, in fact, there may well be more than one real world.

In this respect, we present data from a provincial hospital (with no on-duty cardiologist or specific intensive cardiac care unit) that is interested in improving the quality of performance in dealing with NSTEMI ACS.³ In line with Spanish Cardiology Society clinical practice guidelines,⁴ this hospital introduced a protocol of invasive management for the subgroup of high risk NSTEMI ACS patients. During 2003, we received 30 such patients (pain, electrocardiographic changes and troponin elevation) with an average age of 72±12 years (vs 69±12 years in Bodí et al). We prescribed antiplatelet agents in 96.6% of patients (vs 96%), a combination of aspirin and clopidogrel in 86.6%, anticoagulants in 86.6% (vs 89%) and glycoprotein IIb/IIIa inhibitors in 43.3% (vs 41%). Coronary angiography was performed on 46.6% (vs 73%) and 30% (vs 48%) underwent revascularization, with in-hospital mortality of 13.3% (vs 4%).

Clearly, by comparison with Bodí et al,¹ these data are different. However, the 2 teams were "willing to invade" in dealing with these patients. We believe the principal motive for the difference lies in the availability of an on-site cardiac catheterization laboratory⁵ although other factors might be the type of hospital and clinical service attending these patients,⁶ the older age range of our group⁷ and, even, different interpretations of the guidelines attributable to the idiosyncrasies of each hospital (Bodí et al only start to use glycoprotein IIb/IIIa inhibitors in the cardiac catheterization labo-

ratory whereas in our hospital they are used from the time of admission).

Finally, we wish to congratulate Bodí et al for presenting their results to the scientific community. It is interesting to confirm in the real world what randomized studies have previously validated even though, as we have demonstrated, different results are possible in different contexts. This, together with differences in access to coronary intervention services⁸ (where one Spanish autonomous region may have twice the resources of another), leads us to conclude that patients with NSTEMI ACS receive a far-from-homogeneous attention across the country. Strategies such as the Ministry of Health and Consumer Affairs' Integrated Plan for Ischemic Heart Disease⁹ can help improve the current situation.

Jesús M. de la Hera,^a César Moris,^b
and Vicente Barriales^b

^aUnidad de Cardiología, Hospital Carmen y Severo Ochoa, Cangas del Narcea, Asturias, Spain.

^bServicio de Cardiología, Hospital Universitario Central de Asturias, Oviedo, Asturias, Spain.

REFERENCES

1. Bodí V, Sanchis J, Llácer A, Fácila L, Núñez J, Pellicer M, et al. Estrategia invasiva en el síndrome coronario agudo sin elevación del segmento ST. De los grandes estudios al mundo real. *Rev Esp Cardiol.* 2004;57:1143-50.
2. Sanchis J, Bodí V, Llácer A, Fácila L, Núñez J, Bertomeu V, et al. Usefulness of concomitant myoglobin and troponin elevation as biochemical marker of mortality in non-ST-segment elevation acute coronary syndromes. *Am J Cardiol.* 2003;91:13-6.
3. de la Hera JM, Méndez JA, Barriales V, Sapina D, Carretero G, Jiménez A, et al. Hospital comarcal e infarto agudo de miocardio: la mejora de la calidad es posible [abstract]. *Rev Esp Cardiol.* 2004; 57 Supl 2:44.
4. López Bescós L, Arós F, Lidón RM, Cequier A, Bueno H, Alonso JJ, et al. Actualización (2002) de las guías de práctica clínica de la Sociedad Española de Cardiología en angina inestable/infarto sin elevación del segmento ST. *Rev Esp Cardiol.* 2002;55:631-42.
5. de la Hera JM, Barriales V, Moris C, Álvarez JA, Rubín J, Barriales-Villa R, et al. Registro del infarto de miocardio en Asturias: Proyecto RIMAS. *Med Clin (Barc).* 2004;123:169-73.
6. Bosch X, Verbal F, López de Sá E, Miranda-Guardiola F, Bórquez E, Bethencourt A, et al. Diferencias en el tratamiento y la evolución clínica de los pacientes con síndrome coronario agudo sin elevación del segmento ST en función del servicio clínico de ingreso. *Rev Esp Cardiol.* 2004;57:283-90.
7. Bermejo J, López de Sá E, López-Sendón JL, Pabón P, García E, Bethencourt A, et al. Angina inestable en el anciano: perfil clínico, manejo y mortalidad a los tres meses. Datos del registro PEPA. *Rev Esp Cardiol.* 2000;53:1564-72.
8. López-Palop R, Moreu J, Fernández-Vazquez F, Hernández-Antolín R. Registro Español de Hemodinámica y Cardiología Intervencionista. XIII Informe Oficial de la Sección de Hemodinámica y Cardiología Intervencionista de la Sociedad Española de Cardiología (1990-2003). *Rev Esp Cardiol.* 2004;57:1076-89.
9. Plan Integral de Cardiopatía Isquémica. Disponible en: www.msc.es/planesIntegrales/PICI/pdf/cardiopatia.pdf

Response

To the Editor:

We are sincerely grateful for the comments and interest shown by de la Hera et al with regard to our original article published in the *REVISTA ESPAÑOLA DE CARDIOLOGÍA*.¹ We would very much like to emphasize our wholehearted agreement with the authors.

Although they refer to a limited group of 30 patients, the data presented by de la Hera et al open our eyes to the existence of another and, if we might say so, an even *more* real world. The fact that in this very high risk group of patients (>13% in-hospital mortality) fewer than half undergo coronary angiography (despite the hospital's recommendation for invasive management) should raise a number of questions. Doubtless, the fundamental objective has to be the direct involvement (still beyond a distant horizon in some parts of the country and contexts) of the cardiologist in the management of these patients throughout and especially in the decision-making process.

In any case, we should not flinch from being self-critical:

1. Cardiac catheterization laboratories have to provide maximal services to clinical cardiologists in provincial hospitals in order to program and treat their unstable patients, preferably during hospitalization.

2. Sufficient evidence is already available for us to affirm that in patients with non-ST elevation acute coronary syndrome and high risk criteria it is best to initiate standard treatment and program revascularization prior to discharge, wherever they may be. It would be wise to encourage colleagues in centers without cardiac catheterization laboratories to avoid "self-censorship" or an excessively conservative management of patients with a more unstable profile.

We hope that the excellent scientific initiatives put forward to improve attention to our patients² will receive sufficient Government support for them to become a practical reality.

Vicent Bodí, Juan Sanchis, Julio Núñez,
and Ángel Llácer

Servicio de Cardiología, Hospital Clínico y Universitario,
Valencia, Spain.

REFERENCES

1. Bodí V, Sanchis J, Llácer A, Fácila L, Núñez J, Pellicer M, et al. Estrategia invasiva en el síndrome coronario agudo sin elevación del segmento ST. De los grandes estudios al mundo real. *Rev Esp Cardiol.* 2004;57:1143-50.
2. Plan Integral de Cardiopatía Isquémica. Disponible en: www.msc.es