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INFECTIVE ENDOCARDITIS IN INTRAVENOUS DRUG USERS IN EUROPE: A CLEAN START?

To the Editor:

We read with interest the article by Mori and colleagues¹ illustrating the ethical and technical challenges in dealing with infective endocarditis resulting from intravenous drug abuse (IVDA). This population of patients has been poorly researched. The article rightly highlights the significant issue that drug abuse brings, but is the situation different outside of North America?

Population behaviors are quite different and inevitably can lead to different experiences in managing these cases.

For example, results from the European Survey Project on Alcohol and Other Drugs combined with those from the US Monitoring the Future Survey revealed that American teenagers have high rates of illicit drug use when compared with Europeans. On average, 18% of European students used drugs compared with 35% of US students.² Approximately 8200 people died of an overdose in Europe in 2018, according to the European Drug Report. That is almost 10 times less than the number of overdose deaths in the United States.^{3,4}

The contrast in global compartment is mirrored by the huge difference in cardiothoracic donor organ availability from those dying as a result of drug abuse between Europe and the United States. The drug epidemic has been associated with a sharp increase in organ donation in the United States but not in Europe.⁵

It is likely then that surgeons face differences in the incidence, number, and nature of patients presenting with endocarditis secondary to drug abuse.



Looking at this difference, we reviewed our own institution's patients who had undergone surgical management of infective endocarditis after IVDA from January 2009 to December 2019. Only 5.6% of our patients had a drug abuse cause. The average age was 35 years, similar to that reported by Mori and colleagues,¹ and the most common procedure was tricuspid valve replacement. The average length of stay postoperatively was 17.7 days with an average intensive care unit stay of 3.6 days (4.9 days in the non-intravenous drug user group). All patients were alive at discharge, but 35.7% died during follow-up. Half of the deaths were due to recurrence of infective endocarditis.

Although this cohort formed only a small proportion of all of the patients treated surgically for all-cause endocarditis at our institution, their outcomes are significantly worse. This is despite a relatively uneventful immediate postoperative course.

There is the potential for great differences in the incidence and prevalence of IVDA-induced infective endocarditis between Europe and the United States. Further efforts should be devoted to closely following up these patients, providing support in the hope of improving outcomes and preventing the need for further surgery. Europe's comparatively favorable position with regard to IVDA may make this more achievable.

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