CASE DESCRIPTION

A 30-year-old African American man with sickle cell disease (SCD) presented with diffuse joint pain, shortness of breath, nonproductive cough, and chest pain. Chest x-ray and computed tomography scan revealed cavitary lesions in the lungs. In addition, transthoracic echocardiogram showed moderate tricuspid valve regurgitation and a $3 \times 2.8$ cm mass at the base of the posterior tricuspid valve consistent with vegetation. Blood cultures were positive for viridans streptococci. The patient was diagnosed with right-sided infective endocarditis and started on intravenous (IV) antibiotics.

While hospitalized, the patient was confrontational, left the hospital frequently, and sometimes refused vital sign monitoring. During his stay, 2 subsequent blood cultures were positive for *Pseudomonas aeruginosa* and *Candida albicans*. Given his presentation and history of polysubstance abuse, concern for drug abuse through the IV catheter was raised. The patient refused to submit a urine sample for drug screening; however, blood was drawn with no objections. A serum screen for drugs of abuse was ordered. At our institution, this test requires approval by a laboratory medicine resident and is generally approved only in cases of anuria. On discussing the case with the clinical team, we discovered that the patient had refused urine drug screening and was unaware that serum drug screening was ordered.

DISCUSSION

MEDICAL PERSPECTIVE

The relationship between pain and substance abuse in patients with SCD is complicated, and providers rate encounters with this group as extremely challenging (1). The rate of substance abuse in patients with SCD is believed to be higher than in the general population. Infective endocarditis is one of the most severe complications of IV drug abuse, causing 5%–20% of IV drug abuse–related admissions and 5%–10% of deaths (2). It is suspected when the right heart valves are infected or sepsis is caused by organisms such as *P. aeruginosa* or *C. albicans*. Confirmation of IV drug use can omit the need to search for other causes of symptoms. Confirmation can also affect treatment. For example, naloxone can be given to reverse the effects of opioids in the acute setting. Oral antibiotics could be considered if continued IV access is more harmful than helpful. Harm-reduction strategies could also be explored, such as medication assistance therapy or other forms of substance use treatment.

On the other hand, studies have shown that drug screening in trauma victims in the emergency setting rarely changes management (3, 4). Bast et al. (3) retrospectively reviewed 3312 trauma victims’ charts. Urine drug screen was performed on 2678 patients, of whom 414 tested positive. Interestingly, the management did not change in any of these patients. Similarly, Kellermann et al. (4) showed that management changed in only 4.4% of patients with clinically suspected drug overdose after drug screening was performed.

LABORATORY PERSPECTIVE

Several factors affect the detection of drugs of abuse. These include the dose administered, chronicity of abuse, route of administration, analytical technique, and type of specimen tested (5). Urine, serum, and saliva can be used for drug testing. Urine testing is the preferred method because it is both noninvasive and more sensitive. Generally, the detection time for drugs of abuse in urine is longer than in serum. For example, morphine can be detected in serum for 20 h after intravenous administration of 12 mg of heroin, and in urine for 35.3 h (5).

LEGAL PERSPECTIVE

In general, informed consent is legally required for all procedures and testing, with few exceptions. Informed
CONFLICTING PRINCIPLES
Respect for autonomy requires that providers honor the right of competent patients to self-determination in medical decision-making. It also obligates providers to disclose information required for the patient to make informed decisions. Patient decisions must be voluntary; therefore, coercion or deceit by providers is ethically unacceptable. One of the most common ethical dilemmas is when patients refuse treatments or tests that providers believe honor their obligations of beneficence and nonmaleficence (e.g., Jehovah’s Witness refusal to receive blood products); these principles overlap and obligate providers to (a) maximize benefit for patients as well as (b) do no harm or prevent and minimize harm to patients. In this case, respect for autonomy might result in higher costs and wasted resources because of the inability to tailor care. In cases of drug abuse, patients are typically not acting in their own best interests; however, competent patients have a right to make autonomous decisions that are not in their own best interests. Patients actively under the influence of drugs may have fluctuating capacity that must be carefully assessed. Drug testing may help improve treatment or help initiate appropriate referrals, but doing so over a patient’s objection will damage the trust that is the foundation of the provider–patient relationship.

Resolving ethical dilemmas requires examination of the conflicting principles and justifying the ultimate decision. Positive results may have employment and legal consequences. In addition, testing done for purely medical reasons can sometimes be used as evidence in criminal cases. Providers should also consider the actual changes to treatment and whether those changes justify the damage to trust attendant to overriding the patient’s autonomy. Although existing studies indicate little change in emergency-setting treatment (3, 4), ongoing inpatient treatment may be different. They should also consider whether there are alternatives, such as additional communication with the patient or social work consultations, that could facilitate voluntary disclosure.

Justifying actions that infringe on principles requires consideration of whether (a) the proposed action is likely to achieve the underlying goal; (b) the proposed action presents the lowest degree of infringement; (c) the negative consequences of the action are minimized; (d) no morally preferable options exist; and (e) the proposed...
This case of a patient who refused to be drug tested raises challenging questions about the legal and moral responsibilities of clinical and laboratory staff. It appears that those involved concluded both (a) that the "general treatment consent" obtained on hospital admission . . . legally allowed serum drug screening even without a spe-

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**References**