Hyperphosphatemia in a Patient with Candida Sepsis

D. Robert Dufour1,2*

CASE DESCRIPTION

A 56-year-old man with a history of intravenous drug use and multiple infectious complications developed candida fungemia, which was initially treated with fluconazole and then liposomal amphotericin. At admission, he had normal calcium, phosphate, and magnesium but developed persistent hyperphosphatemia (phosphotungstate on Beckman DCxI) with values of 5 to 6.5 mg/dL (reference interval 2.5–4.5 mg/dL) despite only mild, stable renal dysfunction [normal blood urea nitrogen, creatinine 1.5–1.9 mg/dL (reference interval 0.8–1.5 mg/dL)] and continued normal calcium. He also had normal globulins.

QUESTIONS

1. What are common causes of high phosphate?
2. What artifacts cause increased phosphate?
3. What is the likely cause of increased phosphate in this patient?

The answers are below.

ANSWERS

Common causes of high phosphate are renal failure and hypoparathyroidism, which are ruled out by routine laboratory tests. Transient increases occur with lactic acidosis and ketoacidosis, and chronic increases are seen with many endocrine disorders, but there was no clinical evidence of these conditions. Artifactual hyperphosphatemia commonly occurs in myeloma (1). It has also been reported with liposomal amphotericin owing to direct interference

1 Pathology and Hematology, Veterans Affairs Medical Center, Washington, DC (consultant); 2 Department of Pathology, School of Medicine and Health Sciences, George Washington University, Washington, DC (emeritus professor).
* Address correspondence to this author at: Pathology and Hematology, Veterans Affairs Medical Center, 50 Irving St. NW, Washington DC 20422; e-mail chemdoctorbob@earthlink.net.
in the phosphomolybdate method (2). The temporal association with treatment makes this the likely cause.

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**References**


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**Podcasts Go Platinum!**

Robert Rej1,2*†

“Podcast,” a noun now firmly entrenched in the vernacular, is a recently minted portmanteau suggested just 10 years ago (1, 2). It is sobering to note that other proposals to name the then-new phenomenon of audio production distributed over the Internet included “Audioblogging” and “GuerillaMedia” (2). As I wrote a draft of this article, I became aware that the predecessor for all of today’s mobile media players—the Sony Walkman—just celebrated its 35th anniversary (3). One wonders what Akio Morita, who passed away just 1 year before the advent of the World Wide Web, would think of today’s technologies that in many ways are progeny of that once sleek, now bulky, cassette-playing audio device.

As might have been anticipated, podcasts were first embraced by traditional broadcast media, but that was quickly followed by print media and other organizations who now had new avenues for distribution via the Web. *Clinical Chemistry* was an early adopter of the format and introduced the feature in 2009 (4). At the time, some were skeptical of the project, but new technologies are often regarded as alien in academic environments. Nonetheless, podcasts have proved to be an enormously successful feature of the journal, and they are now part of the offerings of many scientific journals. As of this writing, 250 *Clinical Chemistry* podcasts are available, with downloads to date totaling over 1 million; that’s “platinum” in RIAA (Recording Industry Association of America) parlance.

In addition to downloads, accessible from the journal’s home page (www.clinchem.org), more than 2 dozen of the features have aired on radio stations throughout the world. The host of the *Clinical Chemistry* podcasts is reporter Bob Barrett, who also produced the syndicated radio program *The Health Show* carried by radio stations around the world. Although the final installment of *The Health Show* was aired a year ago (5), the public radio program *The Best of Our Knowledge*, also produced by Barrett (6), has continued the tradition to make available material originally appearing as *Clinical Chemistry* podcasts. These redistributions, as well as availability through the distributor iTunes, have attracted the attention of interested listeners, increasing the visibility of our field well beyond the walls of medical laboratories.

As it was 5 years ago, our vision remains that the podcasts provide an opportunity to amplify the message that appears in the print version. The number of