

11-22-2022

Strategies for Expanding Iohexol Supply During a Shortage

Anupam Sinha

Theodore Conliffe

Follow this and additional works at: https://jdc.jefferson.edu/rothman_institute



Part of the [Radiology Commons](#)

[Let us know how access to this document benefits you](#)

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Rothman Institute Faculty Papers by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

Letters to the Editor

Strategies for Expanding Iohexol Supply During a Shortage

From

Anupam Sinha, DO, and Theodore Conliffe, MD
Department of Rehabilitation Medicine, Thomas Jefferson
University Hospital, Philadelphia, Pa
Rothman Orthopaedics, 925 Chestnut St, Philadelphia, PA
19107
email: anupam.sinha@rothmanortho.com

Editor:

We read with great interest the article by Dr Grist and colleagues from the August 2022 issue of *Radiology*. The authors describe the impact of the iohexol iodinated contrast media (ICM) shortage on radiologic studies, and they provide strategic options to mitigate the effects of the shortage (1). As interventional physiatrists, we too have felt the profound impact of ICM shortage as it relates to fluoroscopically guided pain procedures. ICM use for spinal injections is a standard of care and aids in preventing vascular complications.

Recent guidelines proposed by the Spine Intervention Society and American Academy of Pain Physicians (2) have been useful in navigating the ICM shortage. As a large group practice, our physicians have decided to limit ICM use for only transforaminal epidural injections and cervical and thoracic spinal epidural injections. These procedures involve a higher risk of vascular complications. We eliminated the use of ICM with fluoroscopically guided joint injections, medial branch injections, and lumbar interlaminar epidural injections (ILESI), where the risk of vascular complications is low.

If a procedure is performed without ICM, the risks of performing the procedure without ICM is discussed with the patient. In addition, we are using nonparticulate steroids (ie, dexamethasone) to protect against vascular events and omitting local anesthetic from the injectate in the case of ILESI to avoid spinal anesthesia from inadvertent dural puncture (3).

We hope that these small short-term strategies will aid in extending our ICM supply. We agree with the authors in their midterm and long-term strategies. It would be interesting to hear from other specialties (eg, cardiology) regarding how the ICM shortage is impacting their interventional procedures.

Disclosures of conflicts of interest: A.S. No relevant relationships. T.C. No relevant relationships.

References

1. Grist TM, Canon CL, Fishman EK, Kohi MP, Mossa-Basha M. Short-, Mid-, and Long-Term Strategies to Manage the Shortage of Iohexol. *Radiology* 2022;304(2):289–293.
2. Best Practices for Interventional Pain Procedures during an Iodinated Contrast Media Shortage. American Academy of Pain Medicine/Spine Intervention Society, Multisociety Practice Advisory (May 25, 2022). https://cdn.ymaws.com/www.spineintervention.org/resource/resmgr/patient_safety/22/contrast.advisory.pdf. Accessed July 1, 2022.

3. Rathmell JP, Benzon HT, Dreyfuss P, et al. Safeguards to prevent neurologic complications after epidural steroid injections: consensus opinions from a multidisciplinary working group and national organizations. *Anesthesiology* 2015;122(5):974–984.

Response

From

Thomas M. Grist, MD, FACR
Department of Radiology, University of Wisconsin–
Madison, 600 Highland Ave, Madison, WI 53711
email: tgrist@uwhealth.org

We thank Drs Sinha and Conliffe for their response to our article describing short-, mid-, and long-term strategies to respond to the ICM shortage (1). We appreciate their additional suggestions regarding the use of ICM for image-guided interventions in the spine. The ingenuity and commitment to patient care demonstrated by providers around the globe in response to the crisis is truly inspiring.

According to GE Healthcare, the production of iohexol has returned to 100% precrisis capacity for the 100- and 500-mL vials of iohexol and 100-mL vials of iodixanol. Production of the smaller specialty vial sizes, important for low-dose procedures like spinal interventions, are expected to gradually return to normal over the next several weeks. The result of these developments is that the availability of ICM has improved, and health care systems are no longer facing an acute crisis. However, we must be vigilant in implementing longer-term strategies to avoid similar predicaments due to the shortage of pharmaceuticals and supplies critical for medical imaging.

Importantly, whereas many centers have experienced a return to near-baseline inventory of ICM, most of the centers impacted have not returned to their precrisis level of use of ICM in their imaging protocols. In an informal online survey using the LISTSERV for the Society of Chairs of Academic Radiology Departments, conducted on June 30, 2022, 14 (40%) chairs reported not being significantly impacted by the ICM shortage, and 21 (60%) reported being significantly impacted. Of those impacted, 19 of 21 centers (90%) have returned to a near normal inventory of ICM. However, of these, 11 centers (57%) are currently using many of the ICM-conserving strategies implemented during the crisis. For example, many centers have retained the protocol changes for performing some examinations without ICM or have opted to continue protocol modifications to reduce ICM dose by 10%–20%. Several centers reported their intention to continue the practice of pharmacy staff splitting doses under a hood, therefore separating larger vials into smaller aliquots for common procedures. These include larger volumes for CT, medium volumes (25 mL) for procedural areas, and smaller volumes (5 mL) for fluoroscopic procedures like spinal injections.

The benefits of reducing ICM usage include reducing cost and potential risks associated with ICM usage. These benefits must be weighed against any reduction in

diagnostic accuracy or therapeutic efficacy for imaging procedures, which is largely unknown at this time. Therefore, although the events of the last 2 months have inspired many centers to make lemonade out of lemons, we must continue to evaluate the impact of protocol modifications on the quality, safety, and efficacy of imaging procedures and to seek ways to ensure a reliable supply chain in the future.

Disclosures of conflicts of interest: T.M.G. No relevant relationships.

Reference

1. Grist TM, Canon CL, Fishman EK, Kohi MP, Mossa-Basha M. Short-, Mid-, and Long-Term Strategies to Manage the Shortage of Iohexol. *Radiology* 2022;304(2):289–293.