Regarding the unfortunate death of a patient receiving intravenous curcumin in March 2017:

First this references an ongoing investigation and so reference to specific details of that case will be limited. I will share relevant details as I am able in this summary.

Second we need to remember any loss of life is tragic regardless of the circumstances. This update and note regarding intravenous curcumin is strictly designed to clarify current misconceptions being perpetuated in the media and online sites. We are all saddened by the loss of the person's life in California.

Summary of the main points:

- From accounts as are known today this was a Type-1 Allergic / Anaphylactic reaction during an intravenous administration of curcumin.
- It was not related to the dose or toxicity of the curcumin.
- It was not (as previously mentioned) due to intravenous 'turmeric'.
- It was a sterile intravenous drug (curcumin) from an FDA registered source and a FDA compliant pharmacy.
- The sterile compounded drug was tested for sterility and endotoxin compliance and passed both assessments.
- This reaction (as all accounts point to a Type-1 reaction) is incredibly rare and in 10,000 monitored doses of intravenous curcumin in my personal experience the first such reaction of its kind.
- Drug reactions of this type occur in medicine and while rare are expected and planned for.

Discussion

The reaction based on available data was anaphylactic / allergic (Type-1). These reactions are common in medicine but rarer than other drug reactions. "Drug allergy" refers to immunologically mediated drug hypersensitivity reactions. These may be either Type-1 immunoglobulin E (IgE)–mediated (immediate) or non–IgE-mediated (delayed) hypersensitivity reactions. [1] Drug allergy, occurs in 1% to 2% of all admissions and 3% to 5% of hospitalized patients, respectively but the true incidence of drug allergy in the community, and among children and adults is unknown. [2]

For comparison a long term study reviewed in 2010 [3,4] of injectable iron found an average of three deaths per year due to those injections in the US. In spite of this reaction rates overall for iron injection are low (< 0.01%) but common drugs such as Rituximab, infliximab, Doxil (Caelyx), AmB (AmBisome), Taxanes (paclitaxel, docetaxel) and Platinum drugs hold some of the highest reaction rates (> 10%). [5]

This unfortunate likely Type-1 reaction to intravenous curcumin would be classified as a reaction rate of 0.0001%.

Conclusions:

Adverse events frighten most people which is understandable but overreaction in a manner not commensurate with good medical practice serves no one. Adverse reactions are however a part of medicine and are part of the risk taken when medications are administered. If we are to react to this unfortunate event and discontinue intravenous curcumin (manufactured from FDA cleared product and under FDA compounding rules) we would need to also discontinue most biologic medications, chemotherapies and iron as a few examples, all with much higher reaction rates than curcumin.

At the two clinical sites I directly supervise medical staff administration of intravenous curcumin (the hospital and outpatient clinic) we take all reasonable medical precautions and are equipped and train continuously for these type reactions in all our parenteral medication patients.

References:

[1] Johansson SG, Bieber T, Dahl R, Friedmann PS, Lanier BQ, Lockey RF, et al. Revised nomenclature for allergy for global use: Report of the Nomenclature Review Committee of the World Allergy Organization, October 2003. J Allergy Clin Immunol 2004;113:832–836.

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[3] Wysowski DK, Swartz L, Borders-Hemphill BV, Goulding MR, Dormitzer C. Use of parenteral iron products and serious anaphylactic-type reactions. Am J Hematol. 2010;85(9):650–4.

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[5] Szebeni J, Fishbane S, Hedenus M, et al. Hypersensitivity to intravenous iron: classification, terminology, mechanisms and management. British Journal of Pharmacology. 2015;172(21):5025-5036. doi:10.1111/bph.13268.