

Is Iodine Allergy a Contraindication to Prostate Brachytherapy Using I¹²⁵?

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PURPOSE: Iodine allergy is a frequently mislabeled condition that is often associated with a previous allergic reaction (AR) to shellfish or intravenous contrast medium (IVCM). IgE antibody mediated AR to iodine itself is undocumented and most experts question its existence. AR to seafood is a reaction to proteins in the food such as parvalbumins and tropomyosin. IVCM “anaphylactoid” reaction is the result of osmotic effect and subsequent release of histamines. Regardless, patients who are candidates for I¹²⁵ prostate brachytherapy (PB) experience additional anxiety if they have a suspected Iodine allergy fearing the risk of severe reactions. Our objective was to evaluate the actual incidence of AR to Iodine implants in patients who believed they were allergic to Iodine and underwent an I¹²⁵ PB procedure.

METHODS AND MATERIALS: We evaluated the treatment records of 3370 patients who underwent PB at a single institution between October 1997 and January 2003. 2698/3370 (80%) patients were implanted with Amersham 6711 I¹²⁵ radioactive seeds. 62/2698 (2.3%) patients reported having an Iodine allergy prior to implant. These patients were contacted by telephone and administered a questionnaire by a staff nurse. Specifically, attention was directed to potential signs and symptoms of an AR. 40/60 (66.7%) patients responded to the telephone questionnaire. 2 patients were deceased at time of phone call due to causes other than prostate cancer and were therefore excluded. Median time to follow-up was 40 months (range 4-76 months).

RESULTS: With a median follow-up time greater than three years, 0/40 (0%) patients reported having any signs or symptoms suggestive of AR related to Amersham 6711 I¹²⁵ implant.

CONCLUSIONS: Patients with known Iodine allergies are acceptable candidates for PB using radioactive I¹²⁵ sources. The radioactive Iodine is contained within a titanium enclosure. Therefore, unless this seed capsule is ruptured, I¹²⁵ cannot be released into the bloodstream. Furthermore, if indeed Iodine were to be released into the patient’s body, the likelihood of an allergic reaction is negligible. Therefore, patients are not at risk for allergic reactions to the I¹²⁵ sources and prior history of Iodine allergy should not deter appropriate patients from undergoing PB.