## [ID-P#046] Management Challenges of Hydrofluoric Acid Burn: A Case Report

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**Objective**: Hydrofluoric acid (HF) burns can result in severe morbidity and mortality if not promptly and properly managed. This case study aims to elucidate the clinical presentation, management, and associated complications of a patient with a HF burn.

**Case report**: A 21-year-old male jewelry factory worker presented with a 0.5% second-degree burn on his left hand following exposure to 70% HF. He experienced significant pain, necessitating medical attention. Initial treatment included irrigation with normal saline and the application of a 2.5% calcium gluconate gel. Subsequently, the patient developed hyperkalemia, requiring additional treatment with intravenous administration of 10% calcium gluconate and 50% glucose. The use of the Modified Bier Block method to administer calcium gluconate solution led to swelling in the left forearm, suggesting possible extravasation of the medication. The swelling led to impending compartment syndrome, requiring cessation of calcium therapy and initiation of solely supportive care. The patient was treated with wound debridement and dressing for three months with no long-term deformities. Managing pain in HF burns poses a significant challenge. Subcutaneous infiltration is unsuitable for hand injuries. The Modified Bier Block method is effective but requires ultrasound guidance for arterial line placement to minimize the risk of extravasation, which can complicate tissue injury.

**Conclusions**: This case highlights the complexities of managing HF burns, particularly in controlling pain and preventing complications such as hyperkalemia, hypomagnesemia, hypocalcemia, and tissue injuries. Using ultrasound guidance for arterial line is a potential strategy to reduce these risks.