

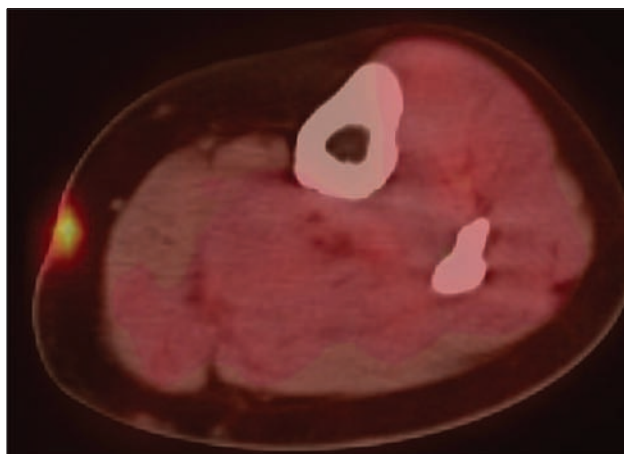


Figure 1. 18F-FDG PET/CT transversal image of the right leg showing hypermetabolism of the 2 cm cutaneous lesion.

plasmocytomas, adnexal carcinomas, dermatofibrosarcoma protuberans and high-grade sarcomas, or cutaneous metastases from various cancers. False-positive cutaneous lesions on PET scans comprise inflammatory and infectious lesions, and are rarely benign skin tumors. One case of hypermetabolic hibernoma [4], and a few cases of moderately hypermetabolic elastofibroma dorsi have been described [5]. We report here the first case of hypermetabolic dermatofibroma. Although the maximal SUV in our case was 1.7 (moderate hypermetabolism), the lesion was considered suspicious and required pathological analysis. Hypermetabolism is supposed to be directly correlated with the malignant potential of soft tissue tumors [6] but in our patient, both the subcutaneous metastasis of the left ankle and the dermatofibroma exhibited the same level of FDG uptake: 1.5 and 1.7 respectively.

This non-specific hypermetabolism is surprising as dermatofibromas are indolent benign tumors. In our case, the pathological pattern of the lesion was cellular and Ki-67 labelling showed 2 to 3% of positive cells. This high cellularity with slight mitotic rate could explain the local FDG uptake.

The PET scan is increasingly being used to evaluate cancer patients and better characterization of potentially false-positive lesions is needed to enhance its specificity. Dermatofibromas are very frequent benign skin tumors, and should be included among these false-positive images. However, in the case of an unknown evolution or clinical atypia, removing hypermetabolic cutaneous lesions for pathological examination remains, of course, indicated. ■

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¹Dermatology Unit, Department of Medicine, Institut Gustave Roussy, 39 rue Camille Desmoulins, 94805 Villejuif, France

²Department of Pathology, Institut Gustave Roussy, Villejuif, France

³Department of Nuclear Medicine, Institut Gustave Roussy, Villejuif, France

<maximebattistella@hotmail.com>

Maxime BATTISTELLA¹
Sabiha TRABELSI¹
Marie-Josée TERRIER-LACOMBE²
Sophie LEBoulleux³
Caroline ROBERT¹

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Severe allergic reactions to prilocaine during intravenous regional anesthesia

A 60-year-old female patient was admitted to the Orthopaedic clinic for surgical treatment of carpal tunnel syndrome. Her laboratory examination was normal and she had no history of previous allergic reactions. Intravenous regional anesthesia (IVRA) was planned and after exsanguination with an Esmarch bandage, IVRA was induced with 10 mL of saline plus 3 mg/kg prilocaine 0.5% diluted with saline to a total of 40 mL. Two to three minutes later, severe erythema and edema developed at the whole limb below the tourniquet level (figure 1). Intravenous hydrocortisone was started immediately. The tourniquet cuff was deflated 20 minutes later and operation was postponed. The skin symptoms disappeared within an hour and no further reaction was observed above the tourniquet level. No systemic reactions were noticed after removal of the tourniquet. Three weeks later a skin prick test was performed with 0.5% prilocaine, negative control (normal saline) and positive control (0.1% histamine). There was a slight positive reaction to the 0.5% prilocaine, with no wheal to the negative control (excludes dermatographism), and 4 mm wheal to the positive control. Subsequently an intradermal injection of 1:100 diluted 0.5% prilocaine was given, to which the patient reacted immediately with a 1 cm diameter erythematous weal.

Discussion

Intravenous regional anesthesia with local anaesthetic drugs is a technique whereby a tourniquet is used to restrict blood flow to an exsanguinated limb. It is safe, easy to administer, and cost-effective for short operative procedures of the extremities [1]. True allergic reactions to local anaesthetic drugs are very rare. Reactions may occur at any time during anaesthesia but they are most common immediately or soon after induction [2]. Most patients who develop a true allergic reaction have had a previous exposure with either no reaction or only a very mild reaction. Adverse reactions to local anaesthetics fall into three categories: allergic, toxic and autonomic. Toxic reactions occur when excessive amounts of a local anaesthetic are given or an inadvertent intravascular injection has occurred. An autonomic reaction can be secondary to the

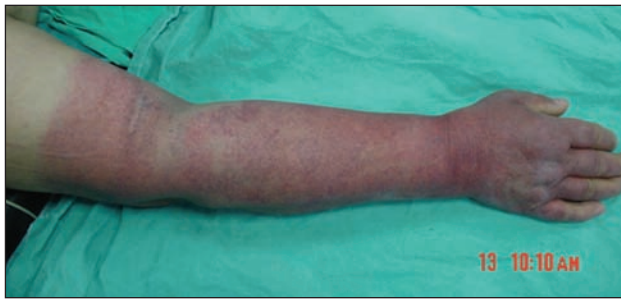


Figure 1. Severe erythema and edema below the tourniquet level.

local anaesthetic's vasoconstrictor effect or be caused by the patient's own endogenous autonomic/psychological reaction to the experience. Autonomic reactions are short lived and usually require minimal treatment. If the physician cannot discern whether the reaction was autonomic, toxic, or a true allergy, skin testing should be performed. Moreover, skin testing is quite safe and provides valuable information for the diagnosis of drug allergy.

In the literature, anaphylactoid reactions to prilocaine during IVRA [3], contact allergy to prilocaine [4], anaphylactic reactions to lidocaine injections [2], and contact urticaria from Emla cream [5] have all been described. To our knowledge, this is one of the few cases of severe allergic reaction to prilocaine during IVRA.

The response to treatment may depend on the severity of the reaction. Even a severe reaction is associated with a prompt and successful response to appropriate treatment in most patients. Treatment of severe cases should include epinephrine (adrenaline) at an early stage. Treatment may also include the use of antihistamines, corticosteroids and intravenous fluids [6]. Indeed, in our case, we treated the patient successfully with hydrocortisone therapy.

In conclusion, we describe a case of a severe allergic reaction to prilocaine during IVRA. In this particular case, we observed that the tourniquet restricted the allergic reaction to the level below the tourniquet and subsequently prevented the systemic anaphylactic reactions. Although severe adverse reactions to local anaesthetic drugs during IVRA are rare, it is important to keep the possibility in mind. ■

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¹ Mustafa Kemal University Faculty of Medicine, Department of Orthopaedics and Traumatology, Antakya Hatay, Turkey
Gazi University Faculty of Medicine, Department of Orthopaedics and Traumatology
Ankara, Turkey

² Mustafa Kemal University Faculty of Medicine, Department of Dermatology, Antakya
Hatay, Turkey

³ Lokman Hekim Private Hospital, Department of Anesthesiology
Ankara, Turkey
<catahan85@yahoo.com>

Yunus DOGRAMACI¹
Asena Cigdem DOGRAMACI²
Erdinc ESEN¹
Tulay KORKMAZ³

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POEMS syndrome with lambda chain deposition in hemangioma

We report a case of POEMS syndrome with a capillary haemangioma showing a deposition of the immunoglobulin lambda chain. Immunochemical and immunofluorescence studies exhibited a non-specific deposition of lambda chains in dermal stroma of haemangioma. Other immunoglobulin subunits were not histologically detected.

Skin changes in POEMS syndrome (Polyneuropathy, Organomegaly, Endocrinopathy, M protein and Skin changes) include different types of haemangioma, such as tufted angioma, capillary haemangioma and glomeruloid haemangioma. These haemangioma appear to be reactive lesions rather than true neoplasms, representing different developmental stages of the same lesion in response to angiogenic stimuli [1]. Although the angiogenic factors implicated have not yet been elucidated, immunoglobulin deposits in endothelial cells could be angiogenic stimuli [1, 2]. Despite the frequent association with monoclonal gammopathy, deposition of immunoglobulin or its component chains in POEMS syndrome has hardly been reported compared with other gammopathy-associated disorders [3]. We here report a case of POEMS syndrome where a capillary haemangioma showed a deposition of immunoglobulin lambda chains in the dermal stroma.

A 58-year-old man presented with a six month history of multiple red papules, measuring up to 5 mm diameter, gradually proliferating on the face, trunk and thigh (*figure 1A*). Examination of the nervous system revealed a chronic progressive polyneuropathy. Serum immunoelectrophoresis showed an IgA lambda monoclonal band. Urine was positive for lambda type Bence-Jones protein. A biopsy of an abdominal papule showed the histological features of capillary haemangioma (*figure 1B*). Immunochemical staining for lambda chains revealed their deposition in the limited areas of dermal stroma and intravascular sera in haemangioma, but not clinically intact skin (*figure 1C*). Stains for kappa, gamma (IgG), mew (IgM), alpha (IgA) chains were negative. Immunofluorescence staining also detected ill-defined accumulation of lambda chain in the dermal stroma (*figure 1D*). Another immunofluorescence study using the patient's serum failed to react to any dermal component of normal skin.

Whereas a number of reports exhibited the deposition of light chains in the kidney [3], these deposits in the skin have hardly been reported, despite the frequent deposition of larger molecules such as IgG, IgM and IgA in the skin of autoimmune disorders. To our knowledge, light chain