Cutaneous Fibrous Histiocytoma*

To the Editor:

A cutaneous fibrous histiocytoma is a common indurated nodule of benign origin composed of a mixture of fibroblastic and histiocytic cells.¹ Other terms such as dermatofibroma, fibrous xanthoma, sclerosing hemangioma, nevoxanthoendothelioma, and atypical fibroxanthoma have also been used.² However, a simple classification is currently used that divides this lesion into two categories: The cutaneous fibrous histiocytoma refers to all superficial tumors of the skin regardless of appearance, whereas lesions penetrating into the subcutus or deep structures are referred to as fibrous histiocytomas.³

Most of these lesions arise spontaneously preceded by minor trauma. Numerous authors have documented mosquito bites as an inciting factor.⁴ Other injuries include scrapes, cuts, irritation from clothing, puncture wounds, and papulopustule lesions.⁵ The majority of these lesions occur between the ages of 20 and 40 years, while the fibrous (deep) lesions occur less frequently than the cutaneous (superficial) variety.¹,³ However, this is unclear since the latter is more inclined to need a biopsy and to be cosmetically removed than the former. Females are affected more often than males with no race cited as predominant.

Cutaneous fibrous histiocytomas usually present as elevated and pedunculated lesions that may flatten over time. They can appear red, red-brown, and sometimes even black as a result of excessive deposits of hemosiderin.¹ They usually measure a few millimeters to a few centimeters in diameter. The fibrous histiocytomas, however, tend to be larger with nearly half usually exceeding 5 cm or greater when excised.¹ Distribution is quite common on the lower extremities, especially in the anterior tibial area. These lesions, however, are rarely found on the foot, palms, and soles.³,⁶

Differential diagnoses include nodular fasciitis, lipoma, neurofibroma, leiomyoma, malignant fibrous histiocytoma, dermatofibrosarcoma, and melanoma. Incidentally, the presence of a central dimple on lateral compression is regarded as a useful clinical sign in distinguishing it from a melanoma.⁷ However, the most important diagnostic distinction is the separation of this tumor from aggressive forms of fibrohistiocytic neoplasms. For instance, the dermatofibrosarcoma protuberans lacks giant cells, inflammatory cells, and xanthomatous elements.¹ With malignant fibrous histiocytomas, there are numerous typical and atypical mitotic figures along with prominent areas of hemorrhage and necrosis.¹,⁶

Case Report

A 48-year-old male presented with a chief complaint of a growing lump on the top of his right foot. He stated that the lesion presented as incurable itching without trauma or relevant history. The patient related also that the mass had grown in size for 3 years.

The patient’s medical history was essentially unremarkable with the physical examination and radiographic analysis within normal limits. During inspection of the dorsum of the right foot, a red-brown, firm, pedunculated soft tissue mass measuring 2.0 × 2.0 × 0.5 cm was noted (Fig. 1).

The mass was freely movable, fluctuant, and presented with hyperkeratosis. The mass was nontender and presented with a flattened appearance. As a result, the surrounding skin developed a moat-like

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Figure 1. A large cutaneous fibrous histiocytoma of the right foot. Note the thick hyperkeratosis atop the lesion secondary to excessive pressure.
appearance from the pressure of the lesion.

Following a local block, the lesion was excisionally biopsied and sent to the pathology department for confirmation. The results of the pathology report were consistent with cutaneous fibrous histiocytoma that showed a focal, dark reddish discoloration and a rubbery consistency. Microscopic examination revealed acanthosis of the overlying epidermis or elongation and widening of the rete pegs. Hyperkeratosis was also noted. Occasional round histiocytic cells and randomly scattered inflammatory cells were also delineated (Fig. 2).

Figure 2. A photomicrograph depicting acanthosis, hyperkeratosis, and a large concentration of histiocytes.

Conclusion

A unique case of a histiocytoma is presented and was found to be consistent with the clinical features described in the literature; however, inconsistent with other aspects such as prevalence and onset. Although the lesion was chronic, there was no evidence of metastasis or malignancy. Excisional biopsy proved to be extremely effective. Currently, there have not been any recurrences or problems.

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References


Bilateral Large Ankle Lipomas

To the Editor:

Lipomas are typically asymptomatic and tend to grow insidiously.1 Often, they are left untreated, unless they grow to become problematic either through impingement on surrounding cutaneous nerves or for reasons of cosmesis. The authors present a case of a patient with a 20-year history of bilateral ankle lipomas that grew symptomatically until they were large enough to interfere with use of shoes.

Lipomas are the most common benign connective tissue tumors.2 All subcutaneous locations are subject, and infrequently, they occur in the anterior mediastinum, the retroperitoneum, within the gastrointestinal wall, and in the deep tissues of the extremities. They may occur as multiple or bilateral lesions in 5% of patients.3

Lipomas found in the foot and ankle region are by comparison vary rare. Studies by Berlin4, Adair et al5, and Geschikter6 reviewing the incidence of lipomas in the foot compared with those found elsewhere in the body reported the incidence of lipomas of the foot to be between none and 0.24%. Bilateral foot lipomas are even rarer. Clinically, however, lipomas may be very common, though perhaps not commonly symptomatic enough to warrant removal and are therefore seldom reported. In fact, in a review of the literature since 1966, only one case of bilateral foot lipomas was reported.7
Subcutaneous lipomas, such as those most commonly found in the foot, are generally small, measuring only 1 to 4 cm in diameter, and have a delicate encapsulation. Microscopic examination is indistinguishable from adult fat. Clinically, however, lipomatous fat may be distinguished from adult fat in that it is often darker in color with larger lobules, and contains a more firm consistency.

**Case Report**

A 79-year-old female presented to the clinic on March 18, 1996, with a chief complaint of continual swelling in both ankles for 20 years. She stated that the swelling has progressed substantially more during the last 3 years. Aside from her visit to a primary care physician, no treatment had been rendered. The patient’s main concern that brought her to the office was her inability to wear shoes.

On physical examination, there was evident bilateral masses located laterally at both ankles from the lateral malleolus and extending distally to the fourth and fifth metatarsal shafts. Both masses measured 5 1/2 × 5 inches. The masses were lipomatous in nature to palpation, nonfluctuant, and nonmobile. There was no pain on palpation. Range of motion was restricted only to ankle dorsiflexion bilateral. Vascular and neurologic examination was within normal limits.

The decision was made to schedule a magnetic resonance imaging examination for both ankle masses. If magnetic resonance imaging revealed a fluid mass, then aspiration for further diagnosis and possible treatment would be discussed; however, if the magnetic resonance imaging revealed a solid mass, as expected, then surgical intervention would be discussed.

Magnetic resonance imaging results of March 26, 1996, revealed a “very prominent and somewhat lobulated soft tissue about (both) ankles laterally . . . possibly lipoma.” The signal was greatest on T2 weighting and fat-suppression imaging (Figs. 1 and 2).

Surgical excision was discussed and the right ankle mass was chosen to be excised first based on the patient noting greater difficulty in wearing shoes on her right foot (Fig. 3). Surgery was performed on April 10, 1996, at Puget Sound Hospital of Tacoma, Washington. The incision chosen was based on the need for remodeling caused by redundant skin after tumor excision; therefore, a 5-cm wide elliptical incision was placed over the center of the mass and parallel to the relaxed skin tension lines, directed in a proximal-to-distal direction, and ending over the fourth metatarsal base aspect (Fig. 4A). A pseudoencapsulated lipomatous mass was immediately identi-
Blunt dissection was used to define a plane of separation circumferentially around the mass from all adjacent tissues. The mass was removed *in toto* (Fig. 4B). Adjacent tissue remodeling was limited to extensive vasculature involvement of surrounding tissues. The incision was reapproximated with 4-0 Vicryl® for superficial closure, and 4-0 nylon for skin closure. A Penrose drain was inserted (Fig. 4C). The results of the microscopic and macroscopic pathology reports confirmed a lipoma measuring $8 \times 6.5 \times 3.5$ cm (Fig. 5).

**Discussion**

Of interest in this case is both the unusual bilateral presentation of the lipomas, and the extraordinary size to which these lipomas grew after 20 years without treatment. Proper diagnosis is essential in extremity soft tissue tumors since 30% may be malignant or undergo malignant degeneration. Magnetic resonance imaging with pathologic confirmation was used in diagnosing the right ankle lipoma. After surgical excision of the right ankle lipoma, the patient progressed uneventfully and is scheduled for excision of the left ankle lipoma.

**References**


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**Figure 4.** A, Wide elliptical incision placed to remodel redundant skin. B, Excision *in toto* of the pseudoencapsulated lipoma measuring $8 \times 6.5 \times 3.5$ cm. C, Closed incision with a Penrose drain.

**Figure 5.** Photomicrograph showing uniform adult fat cells with some sections of fibrous capsule.
Imipenem-Cilastatin-induced Leukocytoclastic Vasculitis*

To the Editor:

Imipenem-cilastatin, a derivative of thienamycin, is a broad-spectrum antibiotic used in the treatment of moderate-to-severe infections of bone and soft tissue, and the urinary and respiratory tracts.1 Several adverse effects have been associated with the use of imipenem, but this is the first reported case in the medical literature of leukocytoclastic vasculitis to be associated with this agent.

Previously reported side effects from imipenem include phlebitis, gastrointestinal disturbance, rash, drug fever, seizures, eosinophilia, and abnormal liver function tests (all less than 4%) in descending order.1 These side effects may have been caused by increased levels of the drug in the patient's bloodstream because of renal or neurologic disease. Cilastatin is used in combination with imipenem to decrease the possibility of nephrotoxicity by inhibiting the formation of toxic breakdown products of imipenem in the renal tubular system.

Leukocytoclastic vasculitis is characterized by the following criteria as postulated by the American College of Rheumatology: a maculopapular rash, palpable purpura, a skin biopsy consistent with granulocytes present in the perivascular and extravascular spaces, and an onset associated with the time of medication start.2 This type of reaction is well documented with a variety of medications including ciprofloxacin, zidovudine, piperazone, and lithium.3-7

Case Report

A 73-year-old male underwent a revisional Keller bunionectomy on July 6, 1995, on an ambulatory basis at the Veteran's Affairs Medical Center in Northport, NY. The patient felt feverish during that weekend and went to the center's emergency department on July 9. He was treated by a medical doctor on staff, given dicloxacillin sodium, and sent home. His symptoms persisted and he presented to the podiatry clinic the next day with edema over the dorsolateral aspect of the left foot and erythema localized to the operative site. A serous discharge was expressed during examination of the suture line. His oral temperature was noted to be 102.6°F and a white blood cell count was 16.2. The patient was admitted and empirically placed on ticarcillin/clavulanate, 3.1 g every 6 hr.

The patient had a medical history of hypertension, gout, osteoarthritis, and hypercholesterolemia. He was taking quinapril hydrochloride for hypertension and nabumetone, as needed, for arthritic pain. His only allergy was to tetracycline, which occurred approximately 20 years previously, where an urticarial rash erupted and subsided after discontinuing the drug.

A Gram's stain of the wound showed gram-positive cocci in pairs and clusters, which was identified by culture as methicillin-sensitive *Staphylococcus aureus*. Blood cultures taken on admission were negative. On the second hospital day, consultation was made with the department of infectious disease and ticarcillin/clavulanate was recommended to be continued. Following 2 days on ticarcillin/clavulanate, the patient showed no improvement in his condition. On the third hospital day, the infectious disease service was consulted again and recommended changing the antibiotic to imipenem intravenously, 500 mg every 6 hr.

Although the white blood cell count dropped within normal range, the patient continued to have significant edema of the forefoot region of the operative foot. On the eighth hospital day, the patient's surgical site was lavaged under high pressure with a solution of polymyxin and bacitracin, and packed open with a Penrose drain. Intraoperative aspirates were negative for calcium urate crystals. In addition, cultures taken during the surgery revealed methicillin-sensitive *S. aureus*. Following the procedure, a marked reduction in edema was noted.

Five days after beginning therapy with imipenem, the patient complained of itching on the medial aspect of the right foot. A localized petechial rash was noted. During follow-up care by the infectious diseases department, it was recommended that clotrimazole/90 cream be applied topically. They also suggested that the platelet count, partial thromboplastin time, and prothrombin time be monitored. Partial thromboplastin time and prothrombin time were within normal limits.

One day later, the rash began to rise from the medial aspect of the right foot to the posterior aspect of the distal one third of the leg (Fig. 1). The lesions were noted to be purpuric macules and papules, some with overlying vesicles (Fig. 2). There was a high index of suspicion that the dermatologic changes were not fungal in etiology, but were caused by drug-mediated hypersensitivity. At this time, clotrimazole/90 cream was discontinued and the patient was administered diphenhydramine hydrochloride, 50 mg

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intramuscularly once. Additionally, the patient was also started on a Deltasone®1 dose pack.

The maculopapular rash continued to spread up both legs to the groin region. The dermatology department was consulted and they performed a 4-mm punch biopsy of a new-onset lesion from the calf of the right leg. An imipenem-induced vasculitis was hypothesized to be the cause of this reaction. The dermatology staff recommended that CH50 titers, also termed total hemolytic complement, be drawn to help confirm the hypothesis. The imipenem was discontinued and the patient was placed on clindamycin, 600 mg orally every 6 hr. The biopsy was noted to be consistent with leukocytoclastic vasculitis (Fig. 3).

The CH50 titers drawn were low, 34 U/ml (normal range 100-300 U/ml), which, in some cases, is indicative of the development of vasculitis.

After imipenem had been discontinued for 6 days, some lesions had resolved and others had decreased in dimensions. The infection of the patient's left foot resolved 2 weeks following incision and drainage and the patient was discharged. Lesions on both legs did not fully resolve until 2 months after discontinuing imipenem, the causative agent. At the 6 months' follow-up examination, the patient was lesion free and the surgical area was asymptomatic.

Discussion

Leukocytoclastic vasculitis manifests clinically as palpable purpura, most often of the lower extremities. Lesions begin as papules measuring up to 1 cm in diameter and can progress to ulcerative plaques. This pathology can be caused by drugs, or systemic or infectious diseases. Among the drugs found to have caused vasculitis are ciprofloxacin, zidovudine, piperazine, aspirin, quinidine, and sulfonamides. Immune complexes deposit themselves within the vessel walls of the upper dermis. Histologically, nuclear and leukocyte fragments may be found in and around the walls of the dermal vasculature. Neutrophils that have migrated to the areas of immune complexes release enzymes that destroy these vessel walls causing hemorrhaging and hence, development of purpuric lesions (Fig. 4)

CH50 assesses the classical complement pathway. Low levels of CH50 are found in patients with immunologic diseases, such as severe rheumatoid arthritis or vasculitis.

If a patient has developed systemic manifestations of this disease, the vasculitis has become chronic in

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nature. Approximately 50% of patients with leukocytoclastic vasculitis will approach this severity. A combination of cyclophosphamide and prednisone has been shown to be successful in treating these cases. Patients who present with only cutaneous manifestations may need only to have the offending antigen removed. A topical steroid may be used to relieve associated pruritis.

Summary

A maculopapular rash has been associated with the administration of imipenem-cilastatin, an antibiotic that was used for treatment of a postoperative infection. This is a first-time association of imipenem with a leukocytoclastic vasculitic reaction. Leukocytoclastic vasculitis has been previously documented with ciprofloxacin, zidovudine, piperazine, and lithium.4-7, 10

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References


Additional References