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A Case of Gonadotropin-Releasing Hormone Agonist-Induced Sterile Abscess Showing a Good Response to Systemic Steroid Therapy

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Dear Editor:

Prostate cancer is a common malignancy in men, and its incidence is increasing rapidly. Because prostate cancer shows androgen dependency in the early stages[1], androgen-deprivation therapy with gonadotropin-releasing hormone (GnRH) agonists is the most effective systemic treatment[2]. Leuproreline (Lucrin; Abbot, Amstelveen, The Netherlands) is a GnRH agonist that blocks pituitary GnRH receptors, leading to the downregulation of luteinizing hormone and follicle-stimulating hormone[3]. This chemical castration provides long-term maximal androgen deprivation[1].

A 79-male-old man, who had painful tender erythematous subcutaneous nodules on the abdomen, visited our dermatologic department in June 2012. He received androgen-deprivation therapy consisting of pretreatment with leuprorelin 11.25 mg at 3-month intervals to treat underlying prostate cancer. A lesion arose from a previous leuprorelin injection site 2 weeks after the last injection (Fig. 1A). He was initially treated with antibiotics and non-steroidal anti-inflammatory drugs, but no improvement was observed. Subsequent histological examination showed neutrophilic and eosinophilic infiltration in the reticular dermis (Fig. 2). Laboratory examination results, including bacterial culture and tuberculosis polymerase chain reaction, were negative. Therefore, he was diagnosed with a sterile abscess caused by GnRH agonist injection and treated with systemic methylprednisolone 16 mg/day. The lesion had almost cleared after 4 weeks and remains in remission as of writing (Fig. 1B).

Leuprorelin, a GnRH agonist, is the most effective ther-

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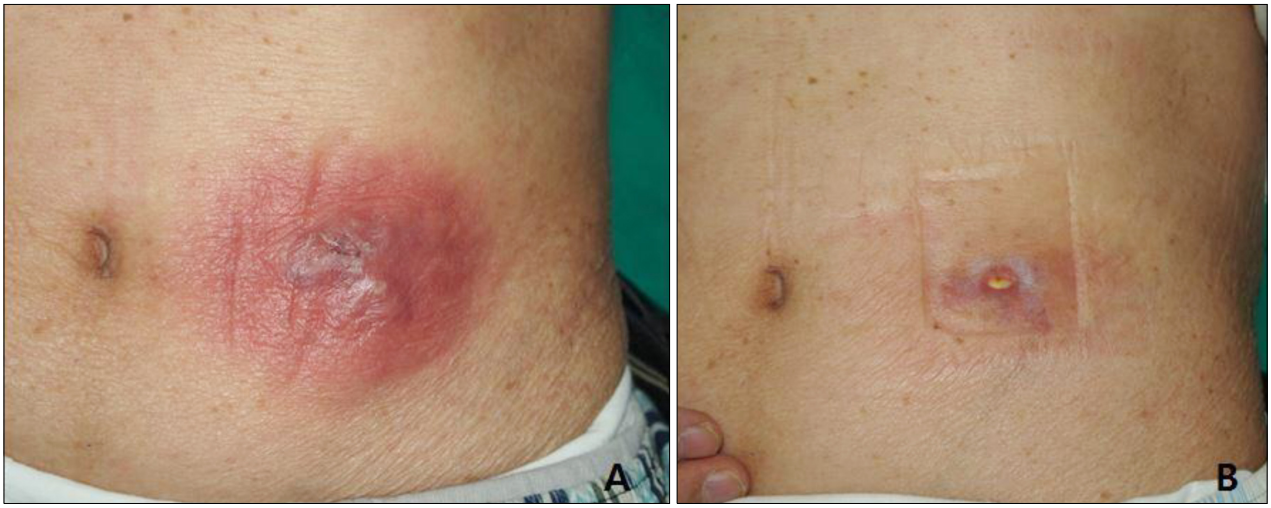

Fig. 1. Painful tender erythematous subcutaneous swelling on abdomen. (A) Before treatment. (B) After 4 weeks of systemic steroid therapy.

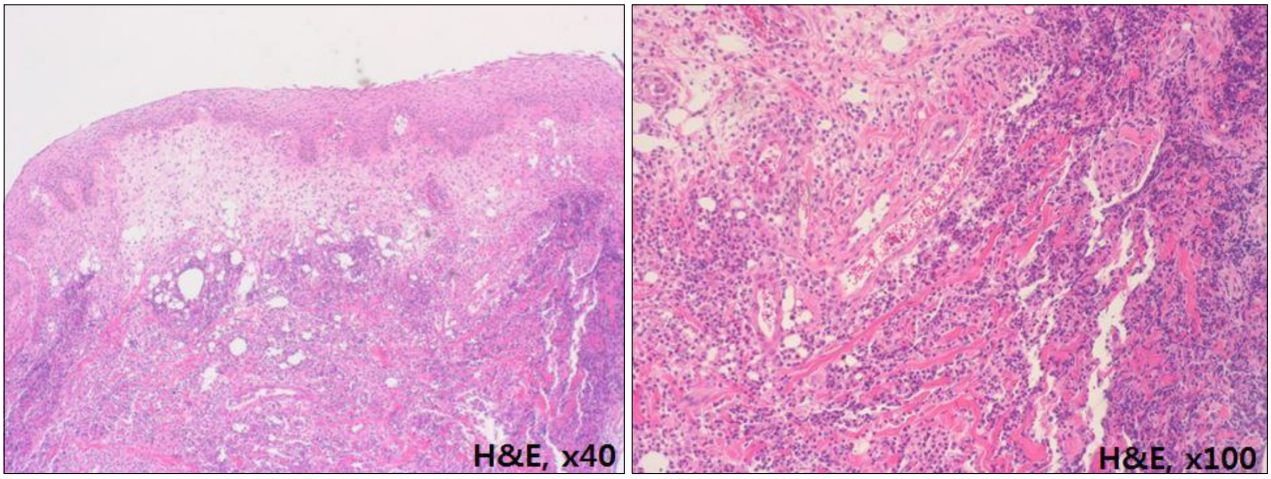

Fig. 2. Histologic slide stained with hematoxylin and eosin reveals neutrophilic and eosinophilic infiltrates in the reticular dermis.

apeutic modality for prostate cancer. Although GnRH agonist therapy appears to have significant benefits for patients, it also has serious side effects including anemia, cognitive changes, obesity, lipid alterations, insulin resistance, coronary artery disease, and osteoporosis[2,3].

The efficacy and side effects of GnRH agonists have recently been reported. In particular, sterile abscess formation has been reported in 3% of patients who received a GnRH agonist[4]. In Korea, only two patients, who were injected with a GnRH agonist for the treatment of central precocious puberty, have been reported to have developed a sterile abscess at the injection site[5]. Thus, our case is the first case of a sterile abscess in a Korean patient with prostate cancer treated with leuprorelin.

There are many theories about the cause of sterile abscess[5]. One possible cause is an additive polymer of leuprorelin similar to that used in resorbable sutures. However, there is a report about granulomatous reactions induced by leuprorelin alone[3]. Thus, this could be thought of as a positive allergic reaction to leuprorelin. Furthermore, these reactions occurred in patients who received daily subcutaneous leuprorelin injections without additive polymer[5]. Thus, these cases suggest leuprorelin itself could be the cause of sterile abscess and granulomatous reaction.

Previous reports describe spontaneous healing of sterile abscesses over several months without treatment[4,5]. Our patient was treated with a systemic steroid and remained in remission for 1 month. Thus, systemic steroid therapy may be a potential therapeutic modality for GnRH agonist-induced sterile abscess.

Dermatologic clinicians should be aware of the potential adverse effects of leuprorelin injection, including sterile

abscess and granulomatous reactions.

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Diagnostic Pitfalls of Differentiating Cellular Digital Fibroma from Superficial Acral Fibromyxoma

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Dear Editor:

Acquired digital fibrokeratoma is an exophytic tumor with hyperkeratotic epidermis on acral sites. Meanwhile, cellular digital fibroma (CDF) is a unique subset of acquired digital fibrokeratomas that comprise slender spindle-shaped CD34-positive cells[1]. Here, we report a rare case of CDF and its clinicopathologic characteristics.

A 38-year-old Korean man presented with a painless nodule, which began to grow six months prior to examination, on the ventral part of the proximal phalanx of his right index finger. Physical examination revealed a fixed erythematous protruding nodule 0.5 cm in diameter (Fig. 1A). The results of punch biopsy for complete removal showed a polypoid tumor constricted at its base and lateral sides by acanthotic epidermis with collarette-like changes (Fig. 1B). Collagenous bundles were filled mostly with myxoid materials and numerous spindle cells arranged in a loose fascicular pattern (Fig. 1C). No nuclear atypia or mitoses were identified. Immunohistochemistry revealed most proliferative spindle cells were positive for CD34 (Fig. 1D) and vimentin (Fig. 1E) but negative for CD99, S-100, and smooth muscle actin. Prominent myxoid stroma was detected by Alcian blue stain (Fig. 1F). On the basis of these findings, the lesion was diagnosed as CDF. After the lesion was completely removed, the patient did not experience any recurrence over 18 months of follow-up.

Since McNiff et al.[1] first described CDF in 2005, their observations have been regarded as important for the diagnosis of fibrohistiocytic neoplasms, which can be easily misdiagnosed as superficial acral fibromyxoma (SAFM)[2].

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