granulomatous infiltration and there was no evidence of metastasis. On careful history taking, we found out that these nodules occurred at the injection site of leuprolide acetate for treatment of prostate cancer. Based on these findings, the diagnosis of foreign body granuloma induced by leuprolide acetate injection was made. Triamcinolone acetate intralesional injections were performed. The patient showed partial resolution to the treatment.

Keyword: Leuprolide acetate, Foreign body granuloma

P459

Injection site reaction after leuprorelin acetate treatment for central precocious puberty
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Leuprorelin acetate is a synthetic agonist of gonadotropin-releasing hormone (GnRH). Because the long term stimulation with leuprorelin acetate downregulates the gonadotropins, it is used for the treatment of the diseases such as prostate cancer, endometriosis and precocious puberty. Although cutaneous adverse events like erythema, induration, sterile abscess and granulomas due to the leuprorelin acetate injection are occasionally reported, precise etiology and pathology is still debating. Only three cases of cutaneous reactions of leuprorelin acetate were reported in Korea. We report the rare case of localized reaction secondary to leuprorelin acetate injection in precocious puberty. An 8-year-old girl presented with erythematous patch with central induration on buttock and left upper arm. She was on the treatment with monthly leuprorelin injection for the precocious puberty. The location of the lesions was consistent with the previous injection site. The lesions appeared after every period of the injection and persisted for 3 to 4 days. Biopsy was performed under the differential diagnosis of injection site reaction, insect bite and foreign body granuloma. Histopathologic findings showed vasculitis with eosinophilic infiltration on buttock and granulomatous inflammation with scattered eosinophils, lymphocytes and multiple microvacuoles on arm. These findings suggested injection site hypersensitivity to leuprorelin acetate.

Keyword: Injection site reaction, Leuprorelin acetate

P460

Granuloma after cosmetic tattoo as permanent make-up
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A 37-year-old woman presented with a 3-year history of tender, diffuse, slightly elevated erythematous papules and patches on and around both eyebrows. The patient underwent a semipermanent cosmetic tattoo procedure on both eyebrows with black dye 3 years ago, and after 2 months had a laser tattoo removal. Laboratory analyses including ACE and calcium revealed no specific abnormalities and chest x-ray was normal. Histopathologic findings from the lesion showed multiple granulomas on the dermis, and diffuse ink particles on the upper dermis. Based on the clinicopathologic features, a diagnosis of foreign body granuloma was made. Laser therapy and intralesional corticosteroids injection were performed with some improvement of the lesions. Cosmetic facial tattoos as permanent make-up for eyebrows is popular, but has also led to a rise in systemic and local cutaneous pathologies. A foreign body granuloma is a delayed complication of an intracutaneous foreign material such as a tattoo ink. It is recommended that full history taking, physical examination, ophthalmologic assessment, serum analyses are conducted to exclude systemic sarcoidosis. Treatment of a granulomatous reaction to tattoo pigmentation is challenging. Intralesional corticosteroids are most often tried, and alternatives are surgical excision and laser therapy. In our case, laser therapy with intralesional corticosteroids showed effective outcome.

Keyword: Granuloma, Cosmetic tattoo, Tattoo

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Delayed onset filler complication
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