A Giant Epidermal Cyst of the Gluteal Region

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Abstract

Epidermal cysts are located subcutaneously and intradermally as well as in deeper anatomical areas, and they are the most common type of cysts in the subcutaneous tissue. They are typically small and are considered to be slow-growing palpable masses. The size of epidermal cysts is usually less than 5 cm. They may occur in any part of the body, especially on the head, neck, and trunk. We present a case of a 30-year-old woman with a giant mass in her right gluteal region. Magnetic resonance imaging and ultrasonography were performed. They revealed a large cystic lesion measuring 16×13×8 cm. The sac and all of its contents were excised under general anesthesia. To our knowledge, it is the largest epidermal inclusion cyst reported in the Turkish literature.

Keywords: Epidermal cyst, gluteal region, subcutaneous cyst

Gluteal Bölgede Dev Epidermal Kist

Öz

Epidermal kist, subkutan, intradermal ve daha derin anatomik bölgelerde yerleşebilir ve subkutan dokuda görülen en yaygın kist tipidir. Genellikle küçük ve yavaş büyüyen palpe edilebilir kitlelerdir. Epidermal kistin boyutu genellikle 5 cm'den küçüktür. Özellikle baş, boyun ve gövdede olmak üzere vücudun herhangi bir yerinde görülebilir. Sağ gluteal bölgede dev kitlesi olan 30 yaşında bir kadın olguyu sunmaktayız. Yapılan manyetik rezonans görüntüleme (MRG) ve ultrasonografi sonucunda 16x13x8 cm büyüklüğünde büyük bir kistik lezyon olarak saptandı. Kist tüm içeriği ile birlikte genel anestezi altında eksize edildi. Literatürü taradığımızda ülkemizden rapor edilen en büyük epidermal kist olduğunu gördük.

Anahtar Kelimeler: Epidermal kist, gluteal bölge, subkutan kist

Epidermal cysts are located subcutaneously and intradermally [1] as well as in deeper anatomical areas like presacral lesions [2]. The most common type of cyst in the subcutaneous tissue is the epidermal cyst [3]. Epidermal cysts have no clear etiopathogenesis. Epidermal inclusion cysts occur due to the migration of epidermal cells to the dermis [1, 3-6]. Epidermal cysts may be found apart from the skin. When they are found in deep anatomical areas, they are known as congenital or developmental cysts (presacral tumors), and they originate from the remnant neuroectodermal embryologic cells [2]. According to the literature, these lesions are small, solitary, benign, and slow-growing masses and are commonly less than 5 cm in size [1, 3, 6, 7]. They are usually located on hair-bearing areas such as the trunk, head, and neck [1, 3-7], but rare cases are reported on the extremities [1]. The surface of the skin usually shows a punctum [1, 7]. Epidermal cysts usually have no symptoms and appear as swelling on the skin. Patients rarely go to the hospital because of the cosmetic problems involved or the symptoms of the inflammation process, such as pain and redness when the cyst is ruptured or inflamed [3, 6, 7]. They stay as benign masses for years but uncommonly become malignant [1, 4, 7].

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Case Presentation

A 30-year-old Turkish woman with no known comorbidity was referred to our tertiary care medical center by her primary care physician because of the presence of a mass in the right gluteal region. The patient noticed the mass 3 years before the hospitalization. It was found that the mass had slowly enlarged through the previous years to form a giant subcutaneous gluteal mass. The patient was unable to sit for a prolonged period and feared that this could be a cancerous growth. She did not complain of fever, chills, weight loss, or drainage from the area. The patient denied prior trau-

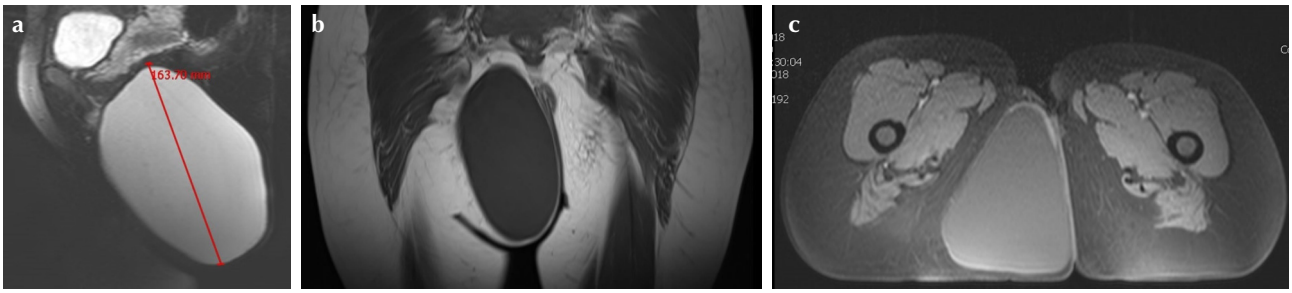

Figure 1. a-c. MRI sagittal T2-weighted images demonstrating a well-defined hyperintense lesion (a). MRI axial T1-weighted images showing a hypointense lesion without communication with the surrounding tissues (b). MRI frontal T2-weighted images demonstrating a well-defined hyperintense lesion (c).

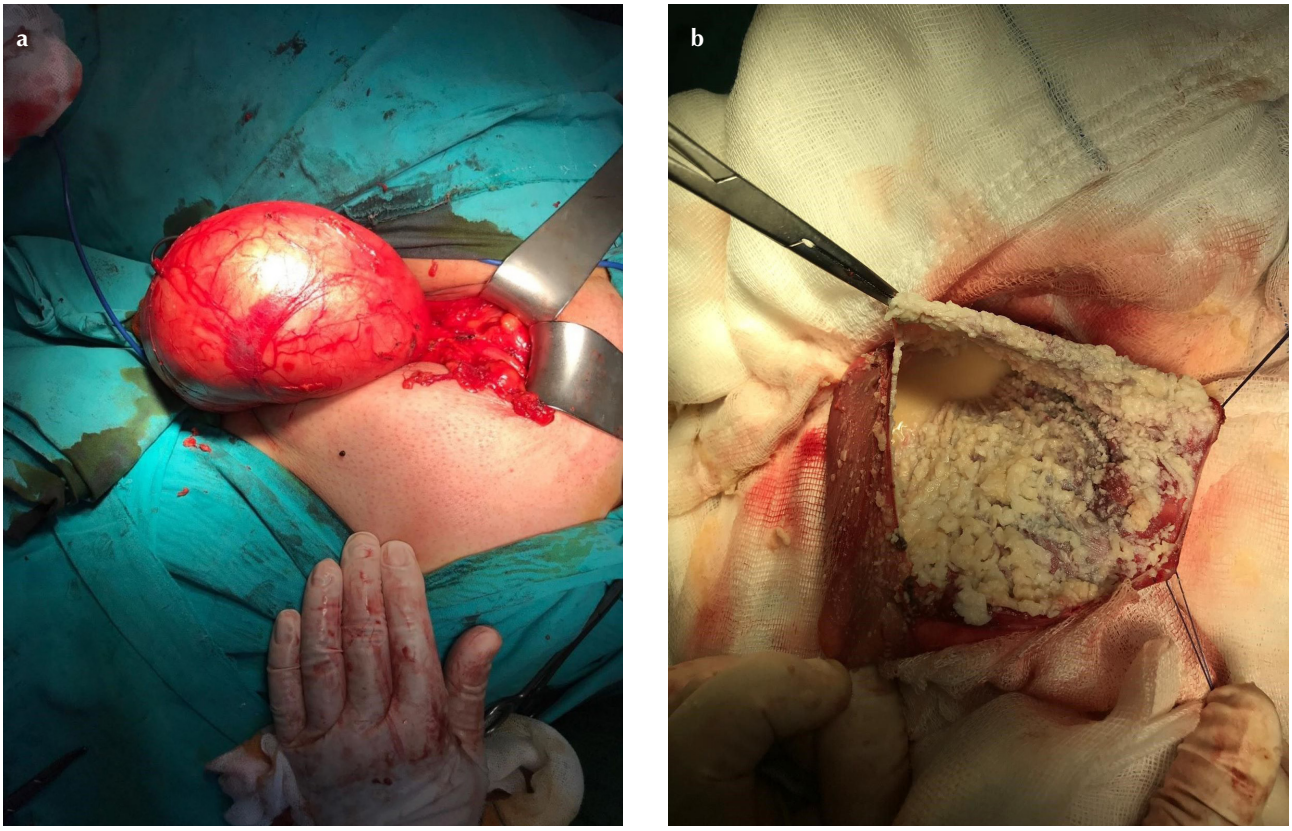

Figure 2. a, b. Lesion dissected from the surrounding tissues under the dermis of the gluteal region (a). Odorless, purulent, and white creamy fluid inside the cyst (b)

ma to the area or a history of malignancy. She is a non-smoker and does not consume alcohol. On physical examination, a large, well-circumscribed, smooth, soft-tissue mass without visible punctum was found in the right gluteal region in palpation. There was no discoloration of the overlying skin. The digital rectal examination showed no communication with the anal canal.

All the preoperative routine laboratory test results were within normal limits. Magnetic resonance imaging (MRI) and ultrasonography were performed for diagnosis. MRI demonstrated a large, well-defined, encapsulated cystic lesion occupying the right gluteal region and measuring 16×13×8 cm. The lesion was hypointense on T1-weighted images and displayed a hyperintense signal on T2-weighted images (Figure 1). There were no inflammatory changes, and the neighboring tissue did not have a modified signal intensity. No vascularity was demonstrated within the mass. Furthermore, ultrasonography showed a smooth-walled collection with intense content in the right gluteal area.

In the view of the imaging findings, the patient accepted the excision of the lesion. A preoperative trucut biopsy was not considered. A surgical excision under general anesthesia in the jack-knife position was made in the right gluteal region. Intraoperatively, the

mass was seen just below the surface of the dermis. The lesion was dissected from the surrounding tissues. When the capsule of the mass was opened, odorless, purulent, and white creamy fluid was found (Figure 2). The operation lasted for 30 minutes. A surgical drain was placed for 2 days. In the postoperative period, no complication occurred, and she was discharged on the second postoperative day. Histological examination revealed the lesion as an epidermal cyst with degenerated squamous epithelial and proteinaceous material of the fluid.

Two months after the operation, the patient had no complaint. Her incision had healed well, and no complication had occurred. There was no evidence of local recurrence.

Discussion

Epidermal cysts are the most common cystic lesions of the subcutaneous tissue comprising approximately 80-90% of the excised subcutaneous cysts [3]. Cystic lesions of the skin generally originate from the epidermis due to inflammation of hair follicles and sebaceous gland and proliferation of the epidermal cells within the dermis [1, 5]. Therefore, they usually occur in hair-bearing skin areas such as the head, neck, and trunk. In the etiology of epidermal cysts, there is also Human Papilloma Virus (HPV), congenital factors, and implantation of epidermal structures into the dermis due to a trauma such as injection [1, 3, 5].

For the definition and differential diagnosis of epidermal cysts, ultrasonography and MRI are helpful [1, 3, 7]. Ultrasonography is easier and cheaper than the other methods. This method is preferred only for small tumors because it cannot show the size of large tumors [3]. Ultrasonography is also used for diagnosis of epidermal cysts in the breasts [1]. On MRI, inclusion cysts are seen as well-defined oval or round lesions with a hypointense signal on T1-weighted images and a hyperintense signal on T2-weighted [1, 3, 4, 7]. In the differential diagnosis of epidermal cyst, trichilemmal cysts, cystic degeneration, vascular and neurogenic tumors, hemorrhagic lymphangioma, cystic teratoma, ganglion cysts, or tumors can be considered. MRI is an excellent method to define neoplasms and soft-tissue tumors [3]. Furthermore, despite its limited use [4], diffusion-weighted MRI is important in diagnosis and differential diagnosis of perineal cystic lesions from other lesions.

Treatment through medication is not effective for such cysts. Therefore, surgical treatment must be chosen. While removing the cyst, there is a risk of spilling its contents into the surrounding areas. Thus, to avoid inflammation and recurrence [1, 7], the entire wall of the cyst must be taken out without rupture. In the literature, even if the entire wall is removed, a 3% recurrence rate has been reported for epidermal cysts. In a study by Bauer that included 3,300 cases of epidermal cysts, there was a 2.2% recurrence rate of malignant degeneration into squamous cell carcinoma [8].

Epidermal cysts usually stay as benign tumors and grow slowly over the years. Large symptomatic epidermal cysts are treated by surgery. The characteristics of the cysts are studied using ultrasonography and MRI techniques before performing the surgery. Uncomplicated cysts are easily removed by surgery, protecting surrounding anatomic tissues and organs, which are studied before surgery by imaging data available. Pericystectomy, with complete excision of the cyst wall, is the definite treatment for epidermal cysts.

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