Umbilical Dermoid Cyst: A Rare Case

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Abstract

Dermoid cysts, a majority of which arise from the ovaries and testicles, can occur in any part of the body in which embryonic elements fuse together. The epithelial-lined cystic cavity of dermoid cysts encloses skin appendages such as hair, hair follicles, sebaceous, and sweat glands. In the literature, very few studies have reported umbilicus-located dermoid cysts. Dermoid cysts generally present as painless slow-growing well-circumscribed lesions. A standard treatment for dermoid cysts, whose definitive diagnosis can be made through histopathological examinations, is surgical excision of the lesion. This study reports a rare case of an umbilicus-located dermoid cyst detected through ultrasound, wherein a dermoid cyst was diagnosed in histopathological evaluation after surgical excision.

Keywords: Dermoid cyst, umbilical discharge, umbilicus

Umblikal Dermoid Kist: Nadir Bir Olgu

Öz

Çoğunluğu overler ve testislerden kaynaklanan dermoid kistler, embriyonik bileşenlerin bir araya geldiği vücudun herhangi bir yerinde görülebilirler. Dermoid kistlerin epitel ile kaplı kistik kaviteleri saç, kıl folikülü, yağ ve ter bezleri gibi cilt eklerini içerir. Literatürde umblikus yerleşimli olduğu bildirilen çok az sayıda olgu sunumu vardır. Dermoid kistler genellikle ağrısız, yavaş büyüyen, iyi sınırlı bir lezyon olarak ortaya çıkar. Kesin tanısı histopatolojik inceleme ile konulabilen dermoid kistlerin standart tedavisi lezyonun cerrahi eksizyonudur. Bu olgu sunumu, umblikus yerleşimli ve ultrason ile tespit edilen, cerrahi eksizyon sonrası histopatolojik değerlendirmede dermoid kist tanısı konulan nadir bir olguyu bildirmektedir.

Anahtar Kelimeler: Dermoid kist, umblikal akıntı, umblikus

Dermoid cysts are benign congenital lesions that can mainly arise in the ovaries and testicles (80%) as well as in the other parts of the body (7%) such as the head and neck [1]. Clinical as well as pathological patterns evidently support the hypothesis of congenital etiopathogenesis. The cysts can develop from any embryological junction in the body; however, its occurrence in the umbilicus is rare. Although they are congenital, they can progress asymptomatically for several years. A definitive diagnosis can be made through histopathological examinations after surgical excision. Here we present the case of an umbilicus-located dermoid cyst and describe its clinical features, differential diagnosis, and treatment with respect to the literature data.

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Case Presentation

A 21-year-old male patient consulted our clinic with the complaint of umbilical discharge (proceeding for nearly a year) as well as a rash (Figure 1). There were no diseases or events of operations in his history. Physical examination revealed a palpable and pasty mass (diameter: 1 cm). A lesion (diameter: 13x10 mm) with intense content was detected under the skin in the heterogeneous echo via ultrasound (US). The lesion was surgically excised under general anesthesia. The fascial defect formed after excision was fixed, and umbilicus reconstruction was performed (Figure 2). There were no complications in the preoperative and postoperative periods. The patient was discharged on postoperative day 1. Further, based on histopathological examination conducted at this stage, the patient was diagnosed with a dermoid cyst (Figure 3). Written Informed consent was obtained from the patient for this study.

Discussion

Dermoid cysts are the most common teratomatous cysts and benign congenital lesions. "Dermoid" is a

Figure 1. Preoperative image of the umbilicus

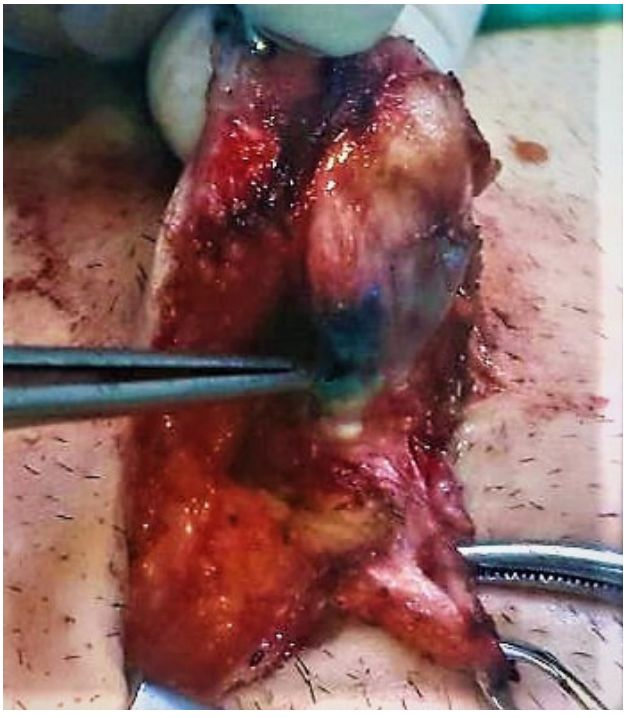

Figure 2. Perioperative image of the dermoid cyst

term used in the generic nomenclature of the epidermoid, dermoid, and teratoid categories in Meyer's categorization [2]. Epidermoid cysts do not comprise adnexal patterns and are only covered with stratified squamous epithelia. Dermoid cysts comprise skin annexes, such as sebaceous glands, sweat glands, or hair follicles, in addition to stratified squamous epithelia. Teratoid cysts have squamous epithelia, dermal annexes, and mesodermal components [2, 3]. Dermoid cysts

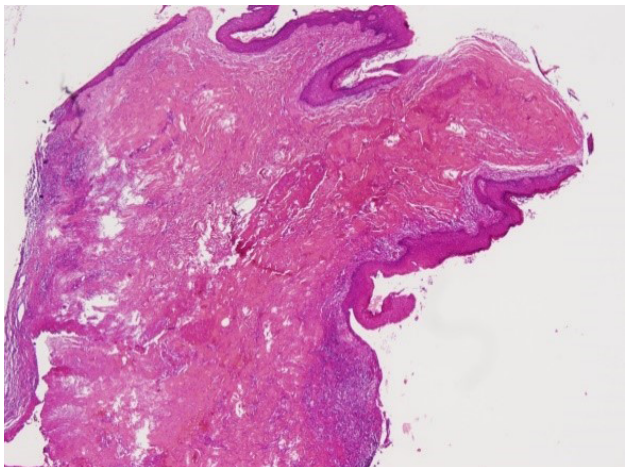

Figure 3. Benign cyst with a layered keratinized multilayered squamous epithelium (hemotoxylin and eosin staining, 100x; 40x)

that are congenital anomalies primarily arise from the ovaries and testicles. They can also emerge in embryological junctions in any part of the body. They generally unite in the midline and are diagnosed at an equal rate in both men and women [3, 4].

Previous history and physical examination are important during the diagnosis stage. Patients remain asymptomatic for serval years and usually begin to show symptoms during their second and third decades of life [5]. Symptoms vary depending on the size and location of the lesion. Based on the contents of the cystic cavity, they can be soft, hard, or pasty with regard to consistency [5]. The patient in our study was in his third decade of life, and there were complaints of discharge and rash on the umbilicus for the past 1 year. Physical examination revealed a palpable and pasty lesion (size: ~1 cm) under the skin. US is a primary modality that can be used to evaluate the cystic or solid component of a lesion. Computed tomography and magnetic resonance imaging can provide detailed information about the characteristics and vicinity of the lesion. Omphalitis, urachus cyst, umbilical hernia, umbilical pilonidal sinus, benign tumors [such as lipoma, fibroma, hemangioma, and cystic lymphangioma] should be considered during the differential diagnosis. Although dermoid cysts are benign, the literature data indicate malign transformation [6]. It is presumed that this condition is related to the neoplastic processes on squamous epithelium cells around the cyst. In addition, in his monography about the umbilicus, Cullen reported that 5 of the 23 umbilical sepsis cases were caused by umbilical dermoid cysts [7]. The retention of the cyst cavity that increases with time can result in a ruptured epithelial layer on the cyst. Therefore, the contents of the cyst are presumed to cause infection through contamination of the peripheral tissues. The

literature comprises studies that have investigated infected umbilical dermoid cyst cases with complaints of acute abdominal findings [8].

The only option for treatment is the total surgical excision of the lesion. The diagnosis is made through a pathological evaluation of the content. In this study, prognosis after this complete surgical excision was fairly good. However, the follow-up of these patients is also important because of a malign transformation risk. In our study, no complication was observed on the incision line during the postoperative follow-ups at 3, 6, and 12 months.

In conclusion, rarely observed umbilical dermoid cysts should be considered in consulting patients complaining of discharge in the umbilicus and a palpable mass in the differential diagnosis; surgical excision should be employed, similar to that used in our patient.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

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