INTRODUCTION

Benign tumors of the vulva are normally classified according to their origin as epithelial cell tumors (e.g., keratinocytic, adnexal and ectopic tumors), or mesenchymal cell tumors (e.g., vascular, fibrous, muscular, neural, adipose and melanocytic tumors) (1). Although lipomas are the most common benign tumors in soft tissues derived from mesenchymal cells, for the vulva they are so rare that there are very few reports. Here we document a case of such a rare large vulvar lipoma in an adolescent with a review of the literature.

CASE REPORT

A 17-yr-old woman, a Tae Kwon Do practitioner, presented to our hospital complaining of a soft, movable mass in the right labia majora (Fig. 1). She reported that it caused discomfort when she exercised. The mass had grown gradually over one year. There was no family history or abnormality in the laboratory tests that could serve as a good reference. Using ultrasonography and computed tomography (CT) scans (Fig. 2), an encapsulated fatty mass was detected on the right labia majora. Tumorectomy was carried out under general anesthesia. Incision was made along the lateral margin of mucosa on the right vulva longitudinally as to conceal the scar from being visible. Mass including 1-cm width of skin strap on the lateral area from the incision line was extracted carefully. There was no difficulty in surgery because the mass was well-encapsulated. After the removal, an evacuator Barovac® (closed suction drainage system) was applied and secure suturing was followed by compressive dressing.

DISCUSSION

The excised specimen measured $8.2 \times 5.5 \times 3.8$ cm and it was surrounded by a fibrous capsule. Serial histological sections showed lobulated and homogeneous mature adipose tissue (Fig. 3), and the histopathologic diagnosis was of a lipoma.

Lipomas are the most common benign tumors of soft tissues. However, conventional lipomas have been reported only rarely as presenting in the vulva. We present a case of vulvar lipoma in a 17-yr-old woman, possibly caused by chronic intermittent irritation.
Large Vulvar Lipoma

Most reported cases of vulvar lipomas involved adults were tumors that had presented since birth. However, our case here was of a conventional lipoma in the vulva of an adolescent 17-yr-old Tae Kwon Do practitioner. Although lipomas are well-known fatty tumors both clinically and pathologically, their precise etiology is unknown. However, one of the most commonly implicated etiologic factors is trauma (7). Copcu (8) reported that chronic minor traumas might trigger the formation and enlargement of lipomas, and described two cases of sport-induced scapular lipomas in a volleyball player and a table tennis player. Our patient mentioned discomforts when kicking due to the mass of the vulva. This may be regarded to show the relationship between the formation or enlargement of lipomas and chronic irritation caused by activities such as kicking. We speculate that the lipoma in this patient arose from chronic intermittent irritation of the soft tissue in the vulva caused by kicking.

Vulvar lipomas need to be differentiated from liposarcomas, which develop rarely but are very similar to lipomas clinically (9). Recently, CT and MRI have been used with some success to differentiate the two (10). To exclude the possibility of malignant tumors, biopsy should be performed by surgical excision. To our knowledge, this is the first case of a conventional vulvar lipoma reported in an adolescent.

Table 1. Cases of conventional vulvar lipomas reported in the literature

| Authors               | Age of patient | Duration | Site                  | Size (cm)    |
|-----------------------|----------------|----------|-----------------------|--------------|
| De Lima Filho et al.  | 35 yr          | 10 yr    | Right labia majora    | 10           |
| Fukamizu et al.       | 7 months       | 7 months | Right labia minora    | 3.5 × 5.5 × 3.5 |
| Van Glabeke et al.    | 5 months       | 5 months | Preputium clitoridis  | Unknown      |
| Kehagias et al.       | 52 yr          | Unknown  | Right labia majora    | 17 × 13 × 7  |
| Agarwal et al.        | 35 yr          | 6 months | Left labia minora     | 4 × 4        |
| Current case          | 17 yr          | 12 months| Right labia majora    | 8.2 × 5.5 × 3.8 |

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