

Lipomas – a health condition that cannot be ignored

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Summary Background. Lipomas are the most common forms of benign soft tissue tumors. They occur as various-sized lumps that rarely transform into malignant tumors. They form as a result of a focal hypertrophy of adipose cells and are usually located subcutaneously. Generally, they are palpable through the covering tissues, soft to the touch, round or oval, painless, usually movable and covered with unchanged skin. They remain mostly asymptomatic and therefore are ignored by both patients and general practitioners. Nevertheless, growing lipomas may cause problems, mainly esthetic. However, in advanced stages, their surgical removal may even require general anesthesia.

Objectives. The aim of the study was to present the results of surgical treatment of subcutaneous lipomas. Moreover, there were presented the most frequent symptoms and problems relating to growing lipomas.

Material and methods. There are presented three cases of patients treated surgically due to advanced subcutaneous lipomas in the Department of Surgical Oncology of the Medical University in Lublin.

Results. The patients' medical condition remained undiagnosed and untreated for a long time. As a result, patients experienced troublesome symptoms and eventually required surgical intervention. The performed operations eased their suffering and improved their quality of life.

Conclusions. Although lipomas are mostly benign, their diagnosis should be confirmed by a doctor. A full physical examination performed on a regular basis should be a strict standard, as this enables detection of even early stage lipomas.

Key words: lipoma, lipomatosis, soft tissue neoplasm, general practice.

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Background

Usually, lipomas are not a serious medical condition. They are trivialized by both physicians and patients. However, clinical practice proves that lipomas may lead to serious complications. General practitioners frequently have contact with subcutaneous lipomas, which are easy to diagnose based on a physical examination and possibly ultrasound. Diagnosing lipomas localized in different regions is more difficult. However, lipomas should be considered in the course of differential diagnostics of unspecific symptoms of soft tissue and bone neoplasms.

Lipomas are well-demarcated, encapsulated, benign soft tissue neoplasm that are formed due to focal hypertrophy of mature adipose cells. They may coexist with other tissues, forming fibrolipomas, angioliipomas, osteoliipomas, chondrolipomas, myoliipomas and others [1]. Lipomas form medium-size tumors and usually are not malignant [2]. Lipomas tend to increase in size slowly and remain asymptomatic for a long time. They usually occur in adults above 39 years of age, especially those that are obese. Morbidity is comparable in men and in women [3, 4]. Single tumors (80%) are more common in women, whereas multiple lipomas mostly affect men.

The etiology of lipomas is unknown. Possible causes include: trauma, infection, chronic irritation, hormonal disturbances and 12q, 13q, 6p chromosome abnormalities [5].

Subcutaneous lipomas are the most common presentation [2]. They present as soft, subcutaneous, oval or round nodules that are palpable and covered by normal skin. They are painless and movable. They mostly occur on the neck, arms, abdomen and thighs [6]. Small-size lipomas usually do not present symptoms but, when they grow larger, may cause problems, especially aesthetic ones.

The gastrointestinal tract is the second most often location of lipomas, where they can occur throughout its entire length [7]. Lipomas are the most common benign nodules of the gastrointestinal tract [8]. When they grow in the esophagus, they may cause dysphagia [9]. Gastric lipomas are usually detected accidentally [10], but they may also be the cause of chronic anemia or massive bleeding [11]. Lipomas are more common in the lower gastrointestinal tract, especially in the region of the ileum, cecum and ascending colon [12, 13]. Lipomas are the third most common tumors of the colon after hyperplastic and adenomatous polyps [12, 14]. In 94% of cases, there are no symptoms [15]. Lipomas measuring in diameter more than 4 cm are considered large and may cause symptoms such as: pain, diarrhea, constipation, vomiting, nausea, obstruction, intussusception and bleeding [8, 16, 17]. Pedunculated lipomas located in the distal section of the gastrointestinal tract may also present symptoms similar to rectal prolapse [18]. In contrast to all other lipomas, lesions located in the colon are more common in women in their 6th and 7th decade of life [19, 20].



Other locations are significantly less common and mostly concern the region of the head and neck [21]. The location of lipomas correlates with an early onset of symptoms, e.g. a growing lipoma in the tongue results in difficulties in speaking and eating [22]. Intracranial lipomas constitute 0.1–0.5% of all primary brain tumors. Initially, they are asymptomatic; however, as they grow, they may cause treatment-resistant migraines [23], focal neurological symptoms and epileptic onsets that are often treatment resistant [24, 25]. Adrenal lipomas constitute 2–4% of all adrenal tumors and are usually detected during imaging performed in the course of diagnostics of arterial hypertension [26]. Mediastinal lipomas may change the location of the thoracic organs, which may present as breathing disorders [27]. Cardiac lipomas constitute 8.4% of primary heart and pericardial tumors. They can cause unspecific symptoms, such as arrhythmias and loss of consciousness [28]. In literature, there are also very rare cases of lipomas in various locations such as in the skeletal system [29–31], muscles [32], eye sockets [33], middle ear [34] and in the spinal cord [35].

Differential diagnostics of multiple lipomas should include syndromes such as Dercum's disease and Madelung's disease. In Dercum's disease, which mostly concerns obese women 25–40 years of age, the lipomas are painful, often occur symmetrically and are accompanied by systematic fatigue along with emotional and neurological disorders [36]. Dercum's disease tends to be inherited in the female line [36]. Madelung's disease is characterized by symmetric, adipose tissue accumulation in the head, neck, torso and arms. It occurs most often in middle-age men abusing alcohol [37, 38].



Photo 1

Objectives

The aim of the study was to present the results of surgical treatment of subcutaneous lipomas. Furthermore, the study presents the most common clinical symptoms of lipomas and explores the topic of lipoma tumor growth in the clinical setting of the general practitioner.

Material and methods

The study presents three cases of patients treated in the Department of Surgical Oncology, University of Lublin due to subcutaneous lipomas. The condition of these patients has not been diagnosed and treated for a long period of time. As a result, this led to troublesome symptoms that required surgical intervention under general anesthesia.

Results

Case 1

74-year-old male, professional beekeeper, exposed to plant protection products at work, negative family history of cancer, non-smoker, did not abuse alcohol, underwent a myocardial infarct 9 years ago and was treated pharmacologically for asthma. For the last 20 years, the patient has been aware of the presence of subcutaneous nodular lesions, which he noticed himself and observed their growth. The patient has not been previously treated and diagnosed. He

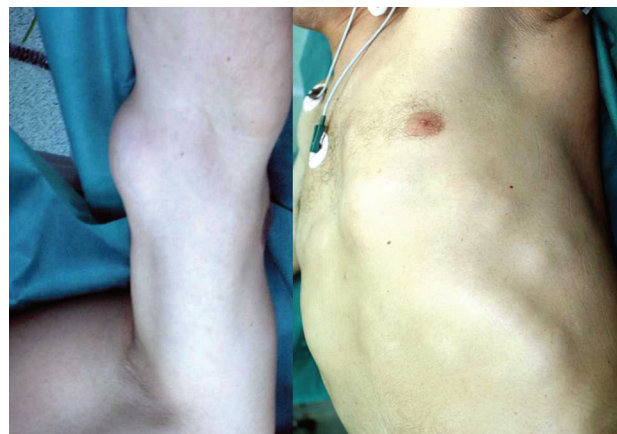


Photo 3



Photo 2



Photo 4

reported to the oncological surgeon because of difficulties in every-day life caused by numerous large subcutaneous lipomas. The patient was qualified for resection of just a part of all the largest in the right forearm and left thigh (Photo 1, 2). Histopathological examination confirmed the diagnosis of lipoma. There were no complications after surgery.

Case 2

46-year-old male, teacher. The brother of his mother suffered from lipomas. Non-smoker, occasionally consumed alcohol. History of two bone fractures. The patient has been treated with beta-blockers for 10 years due to arterial hypertension. 20 years earlier, he felt a subcutaneous thickening in the thoracic area. Previously, the patient underwent surgery of the lesions diagnosed as lipomas. The problem recurs. At the time of the last treatment, 5 subcutaneous lesions were removed from the thoracic area.

Case 3

49-year-old male, lawyer, with negative environmental and family medical history. From youth, the patient has been suffering from vitiligo, periodically undergoing employee health examinations. Many years ago, he noticed multiple subcutaneous thickening in the torso and upper and lower limbs. The lesions increased in size, but did not cause significant problems. Finally, numerous subcutaneous tumors of the torso and upper limbs were removed for aesthetic reasons (Photo 3, 4). There were no complications after surgery. 8 months later, subsequent lesions were removed from the buttock and thigh. Histopathological examination confirmed the diagnosis of lipoma.

Discussion

All of the patients described above have a long history of lipomas. There were a few in whom subcutaneous lipomas eventually became troublesome and symptomatic. Therapeutic intervention (surgery) was performed only when the symptoms began hindering every-day life, although a reduction in the quality of life lasted several years. Due to the chronic nature of the disease, the presented patients gradually became accustomed to the enlarging subcutaneous tumors. Because these patients were in good general condition and did not suffer from acute symptoms of lipomas, they did not feel a need to report the problem to their physicians. The condition was trivialized. In literature, there are many

similar cases [3, 5, 6, 22, 39], including an extreme case of a man with large lipoma of the upper limb (7 kg, 14% of body weight). The lesion grew for many years and resulted in such severe loss of function that the patient altered from right-handed to left-handed and developed a degenerative disease of the spine. The patient concealed his disease and only massive bleeding from a cutaneous vein lying over the tumor forced him to seek help [39]. The role of the physician is to care for the welfare of the patient and to prevent conditions that are foreseeable. This situation could have been avoided if the physicians supervising this patient objectively assessed the problem of growing lipomas.

Detailed checkups are especially indicated in the case of multiple lipomas, which tend to recur and quickly cause discomfort. The natural course of lipomatosis may even come with an incredible presentation, e.g. there was a case of one patient who had approximately 160 lipomas [40]. In the presented patients, the presence of multiple lipomas was associated with pain and aesthetic issues, which significantly influenced their psychophysical welfare. In Dercum's and Madelung's syndromes, which predispose to lipomatosis, depression is often observed [39], which is understandable considering the difficulties in every-day life cause by numerous painful tumors. Hence, multiple lipomas are a serious disease that should be treated as soon as possible.

The presence of multiple and large lipomas in the subcutaneous tissue may cause additional risk due to alimanted surgical access, which is especially important in the case of acute surgical conditions when time is crucial for saving a patient's life and preserving health.

Conclusions

1. Lipomas are benign; however, the diagnosis should be confirmed by a doctor.
2. Asymptomatic lipomas, even small in size, need to be followed up by a general practitioner in order to administer appropriate treatment at the appropriate time.
3. Complete and regular physical examinations enable the detection of subcutaneous lipomas, even at an early stage, and therefore, this should be strict standard practice for general practitioners.
4. Expanding lipomas cause various symptoms depending on location.
5. Lipomas require differentiation from other malignant disease.
6. Multiple and large subcutaneous lipomas may cause difficulties in surgical access.

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