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Case Study

Multiple symmetric lipomatosis and gynecomastia: A case report and relative literature review

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Abstract: Multiple symmetric lipomatosis is a rare disease characterized by a symmetrical accumulation of massive adipose tissue on the neck, the superior part of the trunk, and limbs. Here, we reported an extremely rare case of multiple symmetric lipomatosis in a 46-year-old Chinese man, who has a history of heavy drinking and smoking and presented with diffuse lipomatosis and bilateral breast enlargement. Hyperuricemia and impaired glucose tolerance test were all found in this patient. A brief review of the literature was also made in this article.

Introduction

Multiple symmetric lipomatosis (MSL) is a rare disease characterized by accumulation of unencapsulated fat, mainly located symmetrically around the neck, shoulders, and upper limbs. Its etiology is still unknown; however, previous reports have shown that this disease is associated with alcoholism. Surgical intervention is the only effective treatment for this disease. Here, we describe a 46-year-old Chinese patient with MSL associated with diffuse lipomatosis and bilateral breast enlargement.

Case presentation

A 46-year-old man was admitted to the hospital because of progressive weight gain in recent 4 months. Patient reported that his appetite was increased half year ago after a "cerebral hemorrhage," and significant increased body weight was found 4 months ago. He also complained that there were multiple and symmetric masses at back of the neck and preoccipital area, back, upper arm part, and abdomen. At the same time, bilateral breast of the patient increased progressively.

The patient reported more than 20 years of alcohol abuse (about 500 g/d) and heavy smoking (about 20 cigarettes per day). His family history was unremarkable for neoplasms and congenital diseases. Before this hospitalization, he was examined because of suspicion on Cushing syndrome and gynecomastia. He stated fast growth of extra mass at the back of neck, upper arms, abdomen, and also breast enlargement in the past 4 months. Patient was 87 kg weight, 16.6 m high, and the body mass index was 31.57 kg/m^2. Physical examination showed bilateral masses at the retroauricular, occipital, and upper back areas, upper

Consent: Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

Conflict of interests: The authors declare that they have no conflict of interests.

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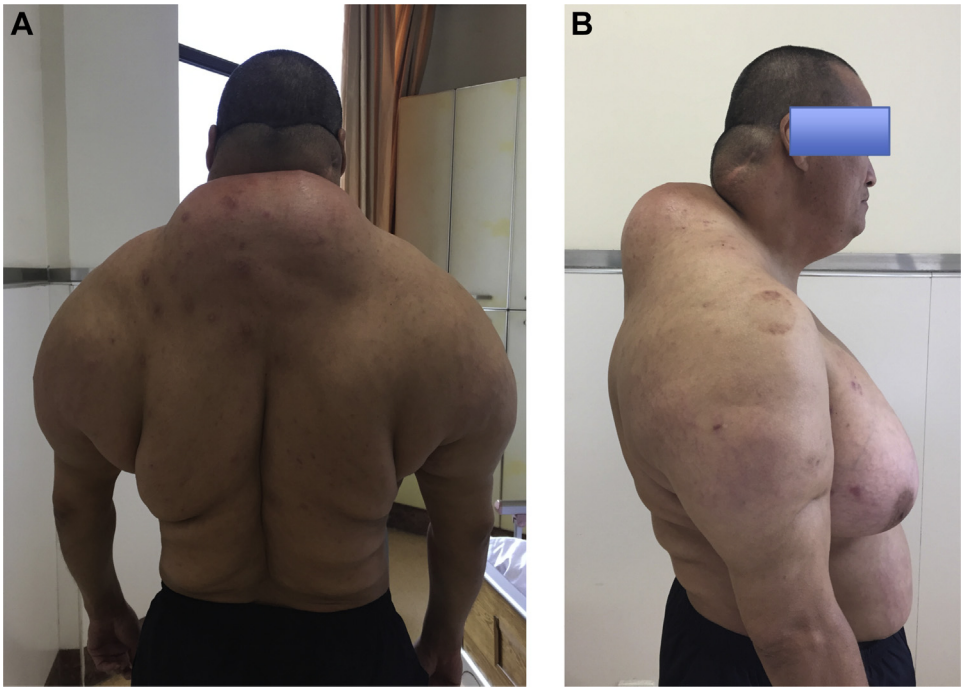

Figure 1 Physical findings of the patient. Enhancement symmetrical of the lipomatous tissue was found at breast, retroauricular, occipital, upper back areas, upper arms, abdomen, and suprapubic area (A and B).

arms, abdomen, and suprapubic area, which combined with breast enlargement (Fig. 1).

Laboratory blood analysis revealed hyperuricemia (Table 1). Parameters for liver and renal function, total cholesterol, and triglyceride were all within the reference range (Table 1). Some hormones including adrenocorticotropic hormone, thyroid-stimulating hormone, triiodothyronine, thyroxine, progesterone, growth hormone, luteinizing hormone, estradiol, estosterone, follicle-stimulating hormone, prolactin were all tested, and all found within reference ranges (data not shown). There were no increased parameters found in markers for carcinoma and hepatocirrhosis (data not shown). The oral glucose tolerance test showed increased postprandial glucose level after 2 hours (173.52 mg/dL), and the peaks of insulin and C-peptide secretion were all delayed (Table 2), indicating impaired glucose tolerance and insulin resistance.

Magnetic resonance imaging for pituitary found no physical alterations (data not shown). Body computed tomography scans and reconstruction indicates accumulation of bilateral subcutaneous masses of nonencapsulated adipose tissue in suboccipital region, lateral regions of the neck, upper back, upper arms, breast, abdomen, and suprapubic area (Fig. 2). Breast ultrasonography indicates excessive fatty tissues deposition without any excessive glandular tissue (Fig. 3). Based on patient's history of alcohol abuse and physical alterations, MSL was diagnosed.

The patient was advised to cease alcohol and smoking after MSL was diagnosed, and he has been under surgery for several times to remove extra adipose tissue. Histopathologic examination of adipose tissue removed from the patients confirmed adipose tissue without malignant transformation (Fig. 4).

Table 1 Parameters of liver and renal function and lipid levels of MSL patient

Parameters	Results	Range
TP (g/dL)	6.59	6.5–8.5
Alb (g/dL)	4.9	4–5.5
AST (U/L)	27	13–35
ALT (U/L)	33	7–40
γ-GT (U/L)	58	7–45
ALP (U/L)	47	35–100
BUN (mg/dL)	14.59	7.28–21.0
Cre (mg/dL)	0.67	0.46–0.83
UA (mg/dL)	9.45	2.35–7.56
Na+ (mEq/L)	140.80	137–147
K+ (mEq/L)	3.90	3.5–5.3
Cl− (mEq/L)	104.20	98–107
CK (U/L)	118	40–200
TC (mg/dL)	149.23	139.2–224.2
TG (mg/dL)	95.69	44.3–150.62
HDL-C (mg/dL)	31.31	30.9–61.9
VLDL (mg/dL)	19.14	8.85–30.12

γ-GT, γ-glutamyltransferase; Alb, albumin; ALP, alkaline phosphates; ALT, alanine transaminase; AST, aspartate amino transferase; BUN, blood urea nitrogen; Cre, creatinine; HDL-C, high-density lipoprotein cholesterol; MSL, multiple symmetric lipomatosis; UA, uric acid; VLDL, very low–density lipoprotein; TC, total cholesterol; TG, total glycerol; TP, total protein.