

# LIPOATROFIA SEMICIRCULAR

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10-03-2007

APARTATS

A- RECULL BIBLIOGRÀFIC PER A LA TAPINET A CÀRREC DE  
RAMONA GARCIA

B- ALTRES ARTICLES

C- INFORMACIÓ DIVERSA DISPONIBLE A LA XARXA

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A- RECULL BIBLIOGRÀFIC PER A TAPINET A CÀRREC DE RAMONA  
GARCIA, METGESSA DEL TREBALL 17 RESSENYES AMB RESUMS.  
(els 17 resums més rellevants dels 123 articles que parlen de la LS, en l'Àmbit laboral i l'Àmbit de la  
patologia comuna)

1. *Ann Dermatol Venereol.* 2006 Jun-Jul;133(6-7):577-80.

**Electromagnetic lipolysis and semicircular lipoatrophy of the thighs** [Article in French]

\* *Flagothier C*, \* *Quatresooz P*, \* *Pierard GE*.

*Service de Dermatopathologie, CHU du Sart Tilman, B-4000 Liege, Belgique.*

**INTRODUCTION:** The semicircular lipoatrophy of the thighs is a disorder whose incidence remained rare for years. Only recently, an "epidemic" situation emerged, affecting hundreds of subjects who shared a status of administrative employee.

**OBSERVATION:** The older etiopathogenic hypotheses give way to a newer one implying the electromagnetic fields generated by computers and their wirings. The resulting modifications in the intrinsic bioelectrical properties of the skin could influence the biology of macrophages exhibiting lipophagic activity in the hypodermis. The electroactivation of these cells could lead to TNF-alpha release.

**DISCUSSION:** The semicircular lipoatrophy of the thighs is a problem that may affect an employee out of two. Rather than hoping an efficacious drug therapy, prevention must be advocated by adapting the work conditions related to the use of computerized devices.

2. *Clin Exp Dermatol.* 1990 Nov;15(6):464-5.

**Semicircular lipoatrophy--a pressure-induced lipoatrophy?**

*Hodak E*, \* *David M*, \* *Sandbank M*.

*Department of Dermatology, Beilinson Medical Center, Petah Tiqva, Sackler School of Medicine, Tel Aviv University, Israel.*

A case of semicircular lipoatrophy, a rare form of localized lipoatrophy, is described in a 33-year-old woman. No precipitating factors such as trauma could be elicited by questioning. However, the patient subsequently realized that she had unwittingly been subjected to repeated daily trauma as she pressed the affected thigh against the edge of the wash bowl while applying make-up. This case thus supports a possible mechanical basis for this rare entity, and demonstrates the importance of taking a careful history in the search for the possible occurrence of minor episodes of trauma in such cases. PMID: 2279347 [PubMed - indexed for MEDLINE]

3. *J Am Acad Dermatol.* 1998 Nov;39(5 Pt 2):879-81.

**Lipoatrophia semicircularis--a traumatic panniculitis: report of seven cases and review of the literature.**

\* Nagore E, \* Sanchez-Motilla JM, \* Rodriguez-Serna M, \* Vilata JJ, \* Aliaga A.

Department of Dermatology, Hospital General Universitario, Valencia, Spain. [eduyame@meditex.es](mailto:eduyame@meditex.es)

Lipoatrophia semicircularis is an apparently rare condition, which presents as semicircular band-like atrophy of the subcutaneous fatty tissue and involving half the circumference of the anterolateral aspects of the thighs. Repeated external microtraumatism seems to be the most plausible explanation in several cases in the literature, though in some patients the underlying traumatic mechanism is difficult to establish. No relation to underlying clinical or biologic abnormalities appears to be. Seven patients with lipoatrophia semicircularis are described. A detailed clinical history revealed precipitating trauma in all cases. A review is made of earlier reports in the literature. PMID: 9810921 [PubMed - indexed for MEDLINE]

4. *Appl Ergon.* 1999 Aug;30(4):319-24.

**Lipoatrophia semicircularis and the relation with office work.**

Hermans V, \* Hautekiet M, \* Haex B, \* Spaepen AJ, \* Van der Perre G.

Laboratory Ergonomics and Occupational Biomechanics, Faculty of Physical Education and Physiotherapy, K.U. Leuven, Belgium. [veerle.hermans@flok.kuleuven.ac.be](mailto:veerle.hermans@flok.kuleuven.ac.be)

The relation between lipoatrophia semicircularis (LS--band-like circular depressions and isolated atrophy of the subcutaneous fatty tissue on the anterior thighs and sitting posture or pressure on the seat surface of office chairs was investigated in an office environment. A questionnaire was presented to 21 subjects and electromyographic measurements, video analysis and pressure measurements were performed. Remarkable posture differences between the LS group and the group without LS were found: less use of the lumbar support of the chair, static sitting postures and a too high seat surface of the office chair were characteristics of the subjects with LS. These observations were confirmed by higher pressure measurements for the subjects with LS. In addition, highly significant pressure differences were found between different chairs. PMID: 10416844 [PubMed - indexed for MEDLINE] :

5. *Br J Dermatol.* 1994 Dec;131(6):887-90.

**Is lipoatrophia semicircularis induced by pressure?**

De Groot AC.

Department of Dermatology, Carolus-Liduin Hospital, BD's-Hertogenbosch, The Netherlands.

Ten patients suffering from lipoatrophia semicircularis are reported. It is suggested that pressure from a chair on the posterior aspect of the thighs, possibly in combination with direct pressure from a desk on the anterior aspect, caused the condition in these patients. Lipoatrophia semicircularis may be quite common, but most patients do not present to a dermatologist. PMID: 7857845 [PubMed - indexed for MEDLINE]

6. *Ned Tijdschr Geneeskd.* 1998 Apr 4;142(14):796-7.

Comment in: *Ned Tijdschr Geneeskd.* 1998 May 30;142(22):1290.

**Impressions on the thighs; semicircular lipoatrophy** [Article in Dutch]

de Rie MA.

Academisch Medisch Centrum, afd. Huidziekten, Amsterdam.

An otherwise healthy woman aged 28 had symmetrical band-shaped dents on both thighs. She worked as a secretary; several female colleagues showed identical lesions. An investigation showed that the arrangement of the office equipment combined with sharp-edged desk tops caused these abnormalities. The diagnosis made read 'semicircular lipoatrophy caused by repetitive leaning against a desk'. This is probably a common problem, although it rarely leads to consultation of a dermatologist.

7. *Spine.* 2003 Jun 1;28(11):1113-21; discussion 1121-2.

**Sitting with adjustable ischial and back supports: biomechanical changes.**

Makhsous M, \* Lin F, \* Hendrix RW, \* Hepler M, \* Zhang LQ.

Sensory Motor Performance Program, Rehabilitation Institute of Chicago, Department of Physical Medicine and Rehabilitation, Northwestern University, Chicago, Illinois 60611, USA. [m-makhsous2@northwestern.edu](mailto:m-makhsous2@northwestern.edu)

**STUDY DESIGN:** The seat and back contact force, pressure distribution, lumbar lordosis, and low back muscle activities associated with a new seat design with adjustable ischial support and backrest were investigated using kinematic, kinetic, electromyographic, and radiographic measurements.

**OBJECTIVES:** To investigate the biomechanical effects of adjusting ischial and backrest supports during sitting.

**SUMMARY OF THE BACKGROUND DATA:** Sitting may induce posterior rotation of the pelvis, reduction of lumbar lordosis, and increases in muscle tension, disc pressure, and pressure on the ischium and coccyx, which may be associated with low back pain. A device that reduces the ischial load and maintains lumbar lordosis may help increase seating comfort and reduce low back pain.

**METHODS:** Fifteen office workers with no known low back pain history were tested. Contact pressure distributions, reaction forces between the buttock-thighs and seat and between the back and backrest, load carried by the seat pan and backrest, sacral inclination, lumbar lordosis, intervertebral space of lumbar spine, and muscular activity in stabilizing the trunk were measured for sitting with and without ischial support and with adjustable back support.

**RESULTS:** When the ischial support was relieved, the center of the force on the seat and on the legs of the chair, and the peak center of pressure on the seat, were significantly ( $P < 0.002$ ) shifted forward toward the thighs. The total contact area on the seat pan and on the backrest was significantly decreased and increased, respectively ( $P < 0.001$ ). The sacral inclination, total and segmental lumbar lordosis, and lumbar spine disc height were significantly increased for sitting upright with backrest, with the lumbar curve close to that during standing.

**CONCLUSIONS:** Sitting with reduced ischial support and fitted backrest to the lower spine altered the contact area, reduced peak pressure under the ischia, reduced muscular activity, maintained total and segmental lumbar lordosis, rotated the sacrum forward, and increased lumbar intervertebral disc heights, which could potentially reduce low back pain.

8. *Curr Opin Rheumatol.* 2002 Sep;14(5):566-70.

**Panniculitis and lipodystrophy.**

\* **Eberhard BA**, \* **Ilowite NT**.

*Schneider Children's Hospital, Long Island Jewish Medical Center, Albert Einstein College of Medicine, New Hyde Park, New York 11040, USA. [aerberhar@lij.edu](mailto:aerberhar@lij.edu)*

Panniculitis and lipodystrophy are rare disorders of subcutaneous tissue. Recently the incidence of lipodystrophy has been increasing secondary to its appearance in patients with HIV. In this population, the lipodystrophy appears to be a direct consequence of drug therapy. A review of the available literature regarding pathogenesis and treatment options is discussed. The diagnosis of panniculitis has been hampered by problems. The recent literature has concentrated on ways of improving pathologic diagnostic yields, and new aids in diagnosis are presented.

9. *Am J Med.* 2000 Feb;108(2):143-52.

**Links Lipodystrophies.**

**Garg A.**

*Department of Internal Medicine and the Center for Human Nutrition, University of Texas Southwestern Medical Center, Dallas 75235-9052, USA.*

The lipodystrophies are rare disorders characterized by selective but variable loss of adipose tissue. Metabolic complications, such as insulin resistance, diabetes mellitus, hypertriglyceridemia, and fatty liver, increase in severity with the extent of fat loss. The lipodystrophies can be classified into two major types: familial and acquired. The main subtypes of familial lipodystrophies are congenital generalized lipodystrophy, an autosomal recessive disorder characterized by near complete lack of metabolically active adipose tissue from birth, and familial partial lipodystrophy, Dunnigan type, an autosomal dominant disorder characterized by loss of subcutaneous fat from the extremities at puberty and excess fat accumulation in the face and neck. Recently, a gene for congenital generalized lipodystrophy was localized to chromosome 9q34, and a gene for familial partial lipodystrophy, Dunnigan type, to chromosome 1q21-22; the genes, however, remain to be identified. Patients with acquired generalized lipodystrophy have generalized loss of subcutaneous fat, but those with acquired partial lipodystrophy have fat loss limited to the face, trunk, and upper extremities. Both varieties occur approximately three times more often in women, begin during childhood, and have underlying autoimmunity. Patients infected with the human immunodeficiency virus (HIV) who are receiving therapy that includes HIV-1 protease inhibitors have been reported to develop a lipodystrophy characterized by loss of subcutaneous fat from the extremities and face but excess fat deposition in the neck and trunk. Localized lipodystrophies can be caused by drugs, pressure, panniculitis, or unknown mechanisms. Current management of patients includes cosmetic surgery, diet, and drug therapy for control of diabetes and dyslipidemia. Lipodystrophies. General. Mes frequent en dones

10. *J Eur Acad Dermatol Venereol.* 2005 Jul;19(4):459-61.

**A new case of semicircular lipoatrophy associated with repeated external microtraumas and review of the literature.**

**Gomez-Espejo C**, \* **Perez-Bernal A**, \* **Camacho-Martinez F**.

*Department of Dermatology, Virgen Macarena Hospital, Avenida Dr Fedriani s/n, 41009-Seville, Spain.*

We present a new case of semicircular lipoatrophy whose lesions disappeared after 2 months of avoiding a repeated trauma in that area. It seems that this is the only associated aetiological factor, and this entity is perhaps a consequence of certain postural habits. The repeated microtraumas would damage the fatty tissue giving rise to the histopathological findings described, which are compatible with traumatic panniculitis. In conclusion, repeated microtraumas may be the aetiological factor in these cutaneous lesions. Other data in favour of this hypothesis are the disappearance of the lesions after avoiding the mechanical trauma, the fact that there were other affected people at work, and that this factor has also been identified in the majority of cases reported previously.

11. *Z Orthop Ihre Grenzgeb.* 1998 May-Jun;136(3):278-80.

**Lipoatrophia semicircularis--an orthopedic diagnosis?**[Article in German]

\* **Cossmann J**, \* **Wagner UA**, \* **Schmitt O**.

*Klinik und Poliklinik f. Orthopädie Universität Bonn.*

**INTRODUCTION:** Lipoatrophia semicircularis (LAS) represents an isolated fatty atrophy usually located at the lower extremity. The atrophy is circular and painless and usually resolves without therapy. The skin modifications occur within a few days or weeks. The etiology is unknown.

**CASE:** In the following we present a case of LAS with a segmental dysfunction of the third ipsilateral lumbal root of a 43-year-old woman. It was possible to provoke a referred pain into the area of atrophy by passive motion of the lumbal spine into the plane of resistant.

**CONCLUSION:** LAS is rare and slightly known among orthopedists. Knowledge of the typical morphological modifications will lead to diagnosis. In most of the cases further diagnostic measures are not necessary. We recommend a segmental investigation of the spine in the case of secured diagnosis.

12. *Wien Klin Wochenschr.* 1975 Mar 7;87(5):164-8.

**Lipoatrophia semicircularis** (author's transl) [Article in German]

\* **Gschwandner WR**, \* **Munzberger H**.

11 young women were seen in the span of 2 years at the Department of Dermatology, University of Innsbruck, with dents of a very similar appearance on the extensor aspect of their thighs. These dents are characterized by their band-like circular localization and isolated atrophy of the subcutaneous fatty tissue. These changes are considered to be a distinct disease, termed lipoatrophia semicircularis. A differentiation from other diseases with atrophy of the subcutaneous fat, especially lipoatrophia annularis may be obtained on the basis of the clinical symptoms, histology and the course of disease. Possible causes and the pathogenesis of this disease are discussed.

13. *J Am Acad Dermatol.* 1996 Oct;35(4):523-8.

**Localized involutinal lipoatrophy: a clinicopathologic study of 16 patients.**

**Dahl PR**, \* **Zalla MJ**, \* **Winkelmann RK**.

*Department of Dermatology, Mayo Clinic, Rochester, USA.*

**BACKGROUND:** Localized loss of adipose tissue without antecedent clinical or histologic inflammation is termed idiopathic lipoatrophy.

**OBJECTIVE:** Our purpose was to study the clinical and pathologic features in 16 patients with clinically focal lipoatrophy and a distinct pathologic pattern of fat lobule involution.

**METHODS:** A retrospective study of 16 patients was performed.

**RESULTS:** The buttocks and proximal extremities were involved most frequently. Lesions were solitary in 10 patients and multiple in six. Nine patients had received intramuscular or intraarticular corticosteroid or antibiotic injections in the affected areas before the development of lipoatrophy. Histologic examination showed that individual fat cells were decreased in size and separated by hyaline material. Progressive reduction in the size and number of adipocytes resulted in diminutive fat lobules with prominent vessels resembling embryonic fat lobules. Some adipocyte masses were acidophilic. Scattered macrophages, confirmed by immunoperoxidase staining for CD68 (KP-1), were identified within the fat lobules and surrounding connective tissue. Yellow-gray granules were recognized within the cytoplasm of macrophages in nine cases. Macrophages becoming lipophages were observed by electron microscopy in one case. Other inflammatory cells were not prominent.

**CONCLUSION:** This is a common pattern of postinjury response to fat tissue characterized by macrophage infiltration of the fat lobules in variable numbers. The term involutional lipoatrophy is justified by the resemblance of the distinctive pathologic changes to embryonic fat lobules.

14. *J Dermatol.* 2002 Oct;29(10):638-43.

**Localized involuntional lipoatrophy: report of six cases.**

\* Yamamoto T, \* Yokozeki H, \* Nishioka K.

Department of Dermatology, Tokyo Medical and Dental University, School of Medicine, Japan.

We herein report six cases of localized involuntional lipoatrophy, who presented with a depressive plaque on the lateralis of the upper arm. All patients were female, and three had previous injections for allergic rhinitis at the affected sites before the development of lipoatrophy. One patient received intramuscular injection at the affected site when she had a cold. Histological examination showed fat lobules composed of small lipocytes in the hyaline connective tissue.

Immunohistochemical examination revealed a number of CD68-positive macrophages in the fat lobules. We consider that localized involuntional lipoatrophy is more common than has been reported, and is occasionally induced by local injections.

PMID: 12432995 [PubMed – view: 0 ]

15. *Australas J Dermatol.* 2006 Nov;47(4):253-7.

**Leg crossers' dimple: A form of localized lipoatrophy.**

Kalouche H, \* Whitfeld MJ.

Department of Dermatology, St Vincent's Hospital and Skin and Cancer Foundation, Darlinghurst, Sydney, New South Wales, Australia. [hdkalouche@yahoo.com.au](mailto:hdkalouche@yahoo.com.au)

We report eight individuals with localized lipoatrophy of the lateral lower leg that were seen by a single dermatologist in a 1-year period. All were asymptomatic and half had mild epidermal changes consistent with lichenification. Seven were an incidental finding during a general skin examination. All had a long-standing history of frequent leg crossing. The sites correlated with the area resting on the patella of the opposing knee. The depressions were larger on sides of leg-crossing preference. Only one had a significant rise in antinuclear antibodies, but this patient had no other clinical or serological abnormalities. This appears to be an extremely common yet previously unreported form of localized lipoatrophy.

16. *Clin Exp Dermatol.* 2001 May;26(3):269-71.

**Lipoatrophy semicircularis induced by trauma.**

Gruber PC, \* Fuller LC.

Department of Dermatology, King's College Hospital, London, UK. [ascalegruber@lineone.net](mailto:ascalegruber@lineone.net)

Lipoatrophy semicircularis is thought to be a rare condition characterized by band-like horizontal depressions of the skin typically involving the lower limbs. Previous literature has suggested that repetitive trauma to the lower limbs could explain this condition; however, no direct causal link has ever been clearly established. There have also been several reports where no preceding history of trauma could be found. In our series we report seven cases of lipoatrophy semicircularis representing over one-third of the staff in a particular office. We propose that the most logical explanation for the indentations present in these individuals is repetitive trauma to their thighs by the sharp edge of the desks. The consistent nature of the distance between the floor and the horizontal indentations on the lower limbs despite differences in height weight and body mass index support this theory. It is likely that this condition is more common than initially thought.

17. *Contact Dermatitis.* 2000 Feb;42(2):101-2.

**Semicircular lipoatrophy: 18 cases in the same company**

Senecal S, Victor V, Choudat D, Hornez-Davin S, Conso F.

PMID: 10703634 [PubMed - indexed for MEDLINE]

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review of the literature. Journal of the European Academy of Dermatology and Venereology. Vol. 19 Issue 4 Page 459 July 2005

A- INFORMACIÓ DIVERSA DISPONIBLE A LA XARXA

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2. [http://osha.europa.eu/publications/newsletter/8/news8\\_es.pdf](http://osha.europa.eu/publications/newsletter/8/news8_es.pdf) (PÀGINA 12)
3. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=10416844&query\\_hl=2&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=10416844&query_hl=2&itool=pubmed_docsum)
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5. [http://www.segla.net/lipoatrofia\\_semicircular.htm](http://www.segla.net/lipoatrofia_semicircular.htm)