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Dr. Sandro Michelini
Editor in chief of The European Journal of Lymphology

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Prof. Alexandre Pissas

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XXX CONGRESS OF THE EUROPEAN GROUP OF LYMPHOLOGY
Bruxelles, 16-17 octobre 2004

PROGRAM

ABSTRACTS
The 30th Congress of a Scientific Society represents an important goal and, at the same moment, the proof of the solid bases on which was born and grow, thanks to the intuition of the founding members and thanks to the generational exchange in the continuity of scientific work produced, up to this moment, basing it on seriousness, originality, engage and constancy.

For these reasons, the special issue of the journal, that is the official organ of the European Group of Lymphology since 1990, according to the tradition, over then the program of the Congress and the Abstracts of the works presented inside it, includes also the entire list of the authors who have published their papers and the topics of them since his birth and all the subjects treated from the first number.

Skim through these pages can be put in evidence the originality and the variety of the themes.

It is natural to observe, above all, as the distribution of the lymphatic system in all the district of the organism and his relationship with the functions of the different organs and apparatus, involves all the disciplines of the medical science: from anatomy to physiology, from immunology to molecular biology, from genetic to pharmacology, from pediatrics to geriatrics, from dermatology to oncology, from internal medicine to surgery and, practically, all the other specialties of medicine.

Often, in the past, also recently, the review represented the natural resonance of the diagnostic, prognostic and therapeutic novelties in lymphology and, recently, has exceeded the frontiers of the old Europe, up to involve the interest of lots of worldwide studios. With these suppositions it’s important to propose to grow up serving a fascinating and, in several aspects, in course of discovering and deepen science, thanks to the work of lots of subjects impassioned.

Not for last, must underline the great continuity between the first editorial published in 1990, as written by the first President of g.e.l., Prof. A. Pissás, and the last one, from the present President Prof. Bourgeois.

This historical link testify the strong actuality of Lymphology, for the develop of which, g.e.l. and its official review will always work.

SANDRO MICHELINI
Editor in chief of F.I.L.R.P.
THE EUROPEAN JOURNAL OF lymphology and related problems

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SUMMARY

GEL NEWSLINES

President Editorial - A. PISSAS, President of the GEL.
Foundation Editorial - P. BOURGEOIS, Editor-in-Chief

CLINICAL SCIENCES

Original articles
- 45 years of research on the lymphatic vessels. - M. SERVELLE.
- The physical treatment of eemases. - A. LEDUC and O. LEDUC
- Scintigraphic study of contralateral vessels in the lymph drainage of the glabella. O. LEDUC, Ph. ALLARD, St. RESIMONT, P. BISSLCHOP and M. VERHAS.

Case report
- Lymphoscintigraphic demonstration of a protein losing enteropathy. P. BOURGEOIS and F. WOLTER.

BASIC SCIENCE

Original article
- Morphological study of the vascular regeneration processes in the case of free skin grafts: experimental approach. Y. GEYSELS, P. LIEVENS, P. BOURGEOIS and A. LEDUC

Informations for authors.
Calendar: GEL MEETING 1990 IN MONT-GODINNE.
GEL MEETING 1990 IN COIMBRA: programma.

THEMES FOR FORTHCOMING ISSUES

- LYMPHOLGY AND ORTHOPAEDICS.
- UPPER AND LOWER LIMB EDEMAS: CLINICAL DATA AND TECHNICAL EVALUATIONS.
- THE SURGERY OF THE LYMPHATIC VESSELS.
The European lymphology Group – Groupement Européen de Lymphologie – this year celebrates its second five-year period.

The large number of meetings organized in Belgium, Italy, France, Germany, England and Portugal testify to the considerable interest shown in lymphology by specialists from a wide range of backgrounds. Lymphology indeed embraces many fields of medicine: anatomy, physiology, pharmacology, internal medicine, surgery, oncology, radiology, nuclear medicine, physiotherapy and kinesitherapy. One of the topics to be discussed at the meeting of the GEL in Coimbra is “Lymphology and Orthopedics”, while another reflects the growing interest shown by specialists from various fields in the lymphatic system.

The European Journal of Lymphology and Related Problems thus plans to provide support for the works carried out by all specialists interested in Lymphology. The magazine is also intended to serve as a meeting point for the various specialist subjects, whereby one group of researchers can learn about the contributions made by their counterparts in a different field. The magazine, it is hoped, will thus prove to be a source of mutual inspiration in basic and clinical lymphological research.

In addition to original works, review articles, etc., the journal’s editorial policy will be to focus each issued or a number of issues on certain specific themes, with in-depth look at the various aspects involved, thus providing readers with a summary at the latest developments or new areas of application and/or research. Articles on basic research and on clinical research as well as results of treatments will be published in an effort to bridge the gap between theory and everyday practice.

With Europe on the threshold of a new era, and the emergence of new borders, there could be no better time to announce the creation of the “European Journal of Lymphology and Related Problems”. The Journal aims to reach people of all languages from all nations.

The success of this journal will depend on those people – present of future – who have taken or will take an interest in lymphology, a discipline which dates back centuries and but much of which remains to be discovered in the years that lie ahead. This challenge confronting us is our challenge and one which, we hope, will be taken up by everyone who will read the journal.

Prof. A. Pissas

LYMPHOLOGY IN EUROPE

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Next October, the Groupement Européen de Lymphologie (GEL),
the European Lymphology Group will hold its 30th Scientific
Meeting in Brussels where it will also celebrate its 25th
anniversary.

As the new President, this event inspires me in some thoughts
on the past, the present and the future of our scientific society and
on Lymphology in Europe.

The GEL was created at a time when no scientific specialties
specifically interested in Lymphology existed on our continent. The
International Society of Lymphology (ISL) had certainly held
its congresses for a long time and its journal Lymphology had
already been the medium for its members' scientific works.

Nevertheless, the biennial nature (once every two years) of the
ISL's meetings, their scattering over the world and their
sometimes 'mammoth' character did not satisfy the needs of
certain members who wanted a greater development of the
specialty specifically within the bounds of our continent. Created
as a reaction to this situation, the GEL, open to all, doctors as well as
nurses, seems to have provided the answer to the expectations of its founders. The holding of its annual, sometimes
bimonthly, meetings successively in France, Belgium, Germany,
Spain, Portugal, Czechoslovakia, Greece, Italy, England, Sweden...
has each time been the occasion for promoting the specialty and
for developing it in a spirit of mutual respect and conviviality. They were the opportunity for scientific advances and progressive
structuring in the specialty. The quality of the suggested works
also brought about the founding and creation of a journal, our
journal, the European Journal of Lymphology and Related
Problems. At once, the EJLRP imposed itself as a publication that
is more clinical than fundamental, and so complementary to
Lymphology. For 10 years, the European Journal of Lymphology
has been able to take pride in quality editions with various articles.
The new team who took over at the beginning of this year were
given a new lease of life and a new dynamic.

A stroke of history or the consequence of GEL's action, Europe
has seen over the last two decades the emergence of different
societies either on a national level or one based on language.
In England, the British Lymphology Interest Group, now British
Lymphology Society. In France, l'Association de Lymphologie
de Langue Française, now Société Française de Lymphologie.
In Italy, la Società Italiana di Lymphologia, the Latino-
Mediterranean Chapter of Lymphology, In Spain, the Club de
Lymphologie. In the Germanic countries, the Gesellschaft
Deutscherprägischer Lymphologen... etc.

Expressions of increasing interest in Lymphology, the emergence and development of these
different national societies, with their sometimes flustered
workforce and varied membership, bring out the best, the
democratisation of the specialty, but also, and potentially,
the worst, the scattering (in all senses of the term) of the most active

and eminent members in the field, the effect of lowering at a local
tier of the global quality level, particularistic and/or national
withdrawals. When faced with these risks, one of the answers,
the answer that the GEL can bring about, is to assume its status as a
European scientific society, federative with its national initiatives,
open, bearing a consensus message and a dynamic which is rich
with these differences. One of the next challenges for our society
will be to carry out this transformation, this evolution.

In two decades, Lymphology has also passed on from the status of
being 'small-scale' medicine, otherwise dispersed where only a few
lymphomas' or some 'physiotherapists' were active, to one of
an interesting medical specialty, in full development, with a
rigorous scientific approaches and practices. Lymphology has
won acclaim with other specialisms and scientific specialties
interested in other aspects of the vascular system: Union
International d'Angiologie, Union Internationale de Phlébologie,
Microcirculation... Henceforth the scientific meetings of these
societies frequently include sessions allocated to Lymphology.
Some nevertheless touch on the risk of "recovery" of our
specialty.

For Lymphology now has to be considered as a medical and
paramedical specialty in its own right. The global management
of people with lympho-vascular pathology now involves multiple
knowledge and hence either specially trained lymphologists or
structured multi-discipline teams with members who are quite
as fair with these pathologies and who integrate all diagnostic or
therapeutic aspects. From this point of view, we have to recognize
that no structured training programme in Lymphology exists.
Courses on the subject are organized here and there but we can
only be struck by the disparity of trainings and the variability of
quality levels. They are in fact either thorough and of good quality
(they only deal with one limited domain of Lymphology such as
surgery or physical treatment), or general and they are often
incomplete and of a varying level. And there lies another of
the challenges that our Group will have to face: the development
and carrying out of a structured, complete program of courses taking
into account all the knowledge necessary for the recognition and
practice of the specialty.

Finally, in a Europe that is building and enlarging, common
questions arise. The answers to these, particularly in the form of
multi-center studies, should, indeed will have to be coordinated
in order to be effective. This can be one of the roles of our society.
Lymphology in Europe enjoys increasing interest and certain
development. The European Lymphology Group will have been
one of the players if not one of the initiators of this success. It
remains to our Society now to ensure its European status, its
federative function and what I feel to be its educational duty.
This evolution will necessitate the participation of all its members.
Together we can accept these challenges.
En ce temps où la transparence devient une vertu qui ne touche plus seulement ses anciens collègues de l’Est (les « élus »), nous nous promettons de rapporter à nos lecteurs et à tous les intervenants potentiels l’ensemble du processus de revue des articles qui sont soumis pour publication dans notre journal.

Qui peut initier ce processus de revue?
Les articles peuvent être soumis (envoys) :
- soit à l’Éditeur en-chef,
- soit à l’un des Éditeurs Associés,
- soit à l’Éditeur Exécutif.
Chacun de ces trois peut initier le processus de revue d’un article. Dans le cas d’un article adressé aux premiers, il demande d’envoyer une copie à l’Éditeur Exécutif.

Qui revue les articles en première lecture?
Tout article soumis pour publication dans l’EJLRP est soumis en première lecture :
- 1° à l’appréciation et à la critique d’au moins un et en général deux spécialistes du domaine abordé dans l’article.
Si un article touche plusieurs domaines, il est soumis à autant de revues qu’il y a de spécialités concernées. Ainsi, un article qui traite de résultats de kinésithérapie analysés ou bavant de techniques de médecine nucléaire sera soumis à des kinésithérapeutes et à des radiothérapeutes.
Quand les avis remis par les revues arrivent et par des moyens de communications, l’Éditeur en-chef, l’Éditeur associé ou l’Éditeur exécutif qui a pris en charge le processus de revue peut demander l’avis d’autres spécialistes.
L’Éditeur-Adjoint de l’EJLRP est établi annuellement la liste des membres du comité scientifique. Chaque année, l’Éditeur Board nomme parmi eux un ou plusieurs revue de revue principaux chaque responsable d’un domaine particulière de la nutrition. C ‘eux-ci de même que l’Éditeur en-chef, l’Éditeur associé ou l’Éditeur exécutif qui a pris en charge le processus de revue peuvent faire appel à des spécialistes extérieurs à la revue (non repris dans le comité scientifique) faisant autorité dans leur domaine.
- 2° à la lecture d’un rédacteur ···
Ce lecteur – non contrôlé par les domaines particuliers soulevés dans l’article mais intéressé – émet ainsi un avis neutre et extérieur.
- des exposés magistraux sur invitation du Comité Scientifique
- des workshops dédiés, à des thèmes précis.

Since transparency nowadays has become a virtue that does not regard only our old colleagues from the East (the "élus"), we three remember to our readers and to all potential authors the review process of articles sent to publication in our journal.

Who can begin the review process?
The articles can be sent to:
- the Editor-in-Chief,
- one of the Associate Editors,
- the Executive Editor.
Each of them can begin the review process of the article. In case of articles sent to the Editor-in-Chief or the Associate Editors, one copy will be sent to the Executive Editor.

Who reviews the articles at first?
All the articles to be published in the EJLRP are addressed to:
- 1° the Evaluation and criticism of at least one but commonly two specialists in the subject of the article.
If one article deals with several subjects, it will be submitted to different specialists in the various fields. So, an article that reports the results of physical therapy by means of techniques of nuclear medicine will be submitted to therapists and radiotherapists. When reviewers' opinions appear too discordant, the Editor-in-Chief, Associate Editor or Executive Editor who started the review process can ask for other specialists' opinions. The Editorial Board of the EJLRP yearly maintains the list of members of the scientific committee. Each year, the Editorial Board chooses among these people one or maybe representative reviewers, each one responsible of a particular field of nutrition. These people like the Editor-in-Chief, the Associate Editor or the Executive Editor who started the review process can ask for the evaluation by other specialists outside the journal (not member of the scientific committee) owing to their particular experience in that specific field.
- 2° The reading by a neutral reviewer.
This reader – not specialist in the subject reported by the article but interested in it – gives his neutral and unconsidered opinion. The EJLRP has a big number of readers. This neutral reviewer evaluates if the article can be understood by most of the readers.
- Presentations, as Posters
- Magistral lectures under invitation of the Scientific Committee
- Workshops upon specific items.
De l’appel à communication?
L’appel à communications avec les thèmes proposés pour le congrès est lancé plusieurs mois avant celui-ci, en fait dans les 3 mois qui suivent la désignation d’un lieu de congrès par l’Assemblée Générale.
Cet appel à communications est notamment publié dans l’EJLRP ainsi que dans toute autre revue ou sur tout autre support ayant reçu l’accord du Comité Scientifique.
Les communications proposées doivent être sur l’abstract form adopté par le GEL et l’EJLRP.

Des abstracts de ce congrès?
Les abstracts des communications acceptées lors du congrès du GEL sont publiés (en anglais seulement) dans le numéro de l’EJLRP qui précède, accompagnant ou suit le congrès.

Du Congress President, du comité organisateur local et de leurs obligations.
L’organisateur retenue est nommé «Congress President».
Le comité organisateur est composé de personnelisés locaux choisis par le Congress President.
Le comité organisateur assure les pauses cafés, les repas sommaires du midi.
Il est d’usage d’offrir un dîner un soir pour les membres du Conseil d’Administration.
La responsabilité financière du congrès incombe totalement au comité d’organisation.

A propos de la participation des membres du GEL?
Il est établi par l’usage que les membres du GEL, en règle de cotisation au GEL (tel qu’atténué par le trésorier du GEL) aient un accès gratuit aux congrès du GEL. Cet usage ne peut être modifié que par une décision de l’Assemblée Générale du GEL sur proposition de l’organisateur.
Une participation financière partielle à l’inscription au congrès à certaines activités proposées dans le cadre de celui-ci a été demandée par le passé au membres du GEL et acceptée.

Quand défendre une proposition d’organisation de congrès?
Les candidatures sont présentées et défendues lors de l’Assemblée Générale du GEL.

Qui décide?
L’Assemblée Générale du GEL décide souverainement.

Call for abstracts?
Call for abstracts with the topics proposed for the Congress must be done several months before the Congress, practically within 3 months after the choice of the Congress site by the General Assembly.
Call for abstracts is published especially in EJLRP like in all other journals or means with the Scientific Committee agreement.
The papers must written inside the form used by GEL and EJLRP.

About abstracts of the Congress?
Abstracts of accepted papers are published (only in English) in the EJLRP issue that precedes, accompanies or follows the Congress.

About the Congress President, the local organizing committee and their duties.
The organizer is the «Congress President».
The organizing committee consists of local people chosen by the Congress President.
The organizing committee sees to coffee breaks and lunches.
It’s used to offer a dinner, one evening to the members of the Executive Committee.
The financial responsibility of the Congress is totally of the organizing committee.

About GEL members participation?
It is used that GEL members, who paid GEL annual fees regularly (as confirmed by GEL Treasurer) have a free of charge participation in GEL Congresses.
This custom can not be changed no way either then by a decision of GEL General Assembly after the organizer’s proposal.
A partial financial participation in the Congress or in certain activities proposed in the ambit of the Congress was asked in the past to GEL members and accepted.

When support the proposal of organization of the Congress?
Candidates are presented and supported during GEL General Assembly.

Who decides?
GEL General Assembly decides without appel.
Gel newlines

A propos des congrès du GEL et de procédures à suivre pour les propositions de leur organisation

Guidelines about GEL Congresses and the procedures that their organizer's proposals should follow

Dr. A. Pissas, Président du GEL / President of GEL

Le texte qui suit reprend l'ensemble des principes et des usages dirigeant l'organisation des congrès du GEL.

A qui adresser ces candidatures?

Les candidatures doivent parvenir au Président du GEL.

Quand déposer ces candidatures?

Les candidatures sont déposées au moins 18 mois avant la date proposée pour l'organisation du congrès.

Qui peut déposer ces candidatures?

Le candidat organisateur doit être connu pour avoir participé à une des différentes sociétés savantes de lymphologie (GEL, ILS, GDL, LMC, ...). Il doit s'agir d'une ville d'Europe, siège d'une université, d'un hôpital, d'une clinique ou d'un institut développant des activités de lymphologie clinique ou fondamentale.

Où organiser un congrès du GEL?

Il doit s'agir d'une ville d'Europe, siège d'une université, d'un hôpital, d'une clinique ou d'un institut développant des activités de lymphologie clinique ou fondamentale.

Durée d'un congrès du GEL?

Un congrès du GEL dure en général 2 jours.

Dans quel langage?

L'anglais et le français sont les langues officielles des congrès du GEL. D'autres langues peuvent être utilisées mais avec traduction simultanée. Les abstracts des communications acceptées ne sont pas publiés dans l'EJLRP qu'en anglais.

A propos de l'organisation scientifique des congrès du GEL?


Le Comité Scientifique élit en son sein un Président en charge de l'organisation du programme scientifique avec le Président du congrès. Le programme scientifique des congrès du GEL inclut:

- des présentations orales de travaux originaux cliniques ou fondamentaux, de cas cliniques intéressants;
- des présentations sous forme de poster. L'EJLRP est une revue bimensuelle en définitive un public très large, ce reviewer 'candidate' veille également à ce que l'article proposé soit être compris du plus grand nombre... du moins autant que faire se peut.
- 3e à l'appréciation de l'éditeur en chef et de l'éditeur (associé ou exécutif) qui a pris le processus en charge.

The following text deal with all the principles and rules that guide the organizers of GEL Congresses.

To whom address these candidatures?

The candidatures must be sent to the President of GEL.

When to present candidatures?

The candidatures are presented at least 18 months before the date proposed for the organization of the Congress.

Who can present these candidatures?

The candidate organizer must be known for having participated in one of the different scientific Societies concerning Lymphology (GEL, ILS, GDL, LMC, ...).

Where to organize GEL Congress?

The Congress must be organized in a European city, site of a University, Hospital, Clinic or Institute dealing with both clinical and basic lymphological activities.

Duration of GEL Congress?

GEL Congress lasts two days generally.

In which languages?

English and French are the official languages of GEL Congresses. Other languages can be used but with simultaneous translation. Abstracts of accepted papers can be published in EJLRP only in English.

About scientific organization of GEL Congresses?

The scientific organization is realized by the Scientific Committee. The Scientific Committee is formed among others by past and present Presidents of GEL, Honorary President, members of the Executive Committee of GEL, President of the Congress and by all people chosen for this task.

The Scientific Committee proposes general topics for the Congress. The selection of papers is done by the Scientific Committee. The Scientific Committee chooses among its members a President responsible of the organization of the scientific program together with the President of the Congress.

The scientific program of the GEL Congress includes:

- Oral presentations, of original clinic and basic scientific works and of interesting clinical cases;
- The evaluation of the Editor-in-Chief, Associate Editor or Executive Editor who started the review process.

The reviewers' work

Each reviewer gives his/her justified opinion.
Le travail des revues?
Chaque revue analyse l’article proposé sur des bases des critères suivants:
- son intérêt dans leur domaine de spécialité propre
- son intérêt général dans le cadre de la revue (tenant compte de la connaissance qu’ils ont de ses lecteurs)
- qualité sur le fond
- qualité formelle
Les revue relèvent les erreurs méthodologiques, de résultats, d’interprétation (« critérios points »). Les auteurs doivent corriger ces différents points ou s’apporter des explications claires. Les corrections ou explications apportées doivent recevoir l’aval des revue concernés. Les revue soulignent les points qui relèvent de la discussion et laissent aux auteurs la liberté de se exprimer sur les sujets qui reviennent à leur défaveur. Les revue sont invités à faire toute proposition utile qui augmente, améliore la faisabilité et la qualité de l’article pour l’ensemble des lecteurs: ajouter de tableaux, autre présentation des résultats, références, méthodologie plus détaillée, ... Les auteurs peuvent ne pas suivre les propositions des revues mais les éditeurs responsables sont alors jugés de niveau qualitatif de l’article représenté pour publication. Chaque revue conclut par un des avis suivants:
- accepté tel quel;
- acceptable s’il y est tenu compte des remarques émises;
- unacceptable (soit dans la forme proposée, soit sur le fond des résultats). Ces avis sont colligés par l’éditeur-en-Chief ou l’éditeur Exécutif ou Associé ou transmis (anonymise) aux auteurs. Ils sont également communiqués aux revue.
De la renommation des articles revués et corrigés?
Les articles corrigés sont à réadresser à l’éditeur-en-Chief ou à l’éditeur Exécutif ou à l’éditeur ou association. Les auteurs peuvent accompagner leur article d’une lettre où ils argumentent à propos d’éléments qu’ils n’ont pas repris dans leur correction. Lorsqu’un article a reçu de la part d’un revue ou de plusieurs revue:
- un avis négatif (insuffisant);
- des demandes majeures de modification;
- des critiques majeures (« critérios points »);
il est ressenti en deuxième lecture à ces mêmes revues. De la décision finale de publication?
Les Éditeurs souvent en général l’avis des revue. Dans certains cas, ils peuvent néanmoins juger de la pertinence de certains objections aux remarques des revue et peuvent en tenir compte dans leur décision ultime de publier ou non. Les analyses, avis et/ou remarques transmises par les revue tout en première qu’en deuxième lecture sont conservées par l’éditeur-en-Chief et par l’éditeur Exécutif de même que les articles dans leurs formes originales et corrigées. Toute contestation d’une décision de publication contrairement à un des avis des revue:
1° peut donner lieu:
- à une lettre à l’éditeur concernant l’article incriminé. Les auteurs doivent alors dans leur réponse reprendre les éléments non repris dans leur article corrigé;
- à un éditorial dont la publication dans la forme est laissée à l’appréciation de l’éditeur-en-Chief;
2° peut être soulevée lors d’une réunion de l’Éditeur Board.
De la «durée» de ce processus?
Les revue se sont engagés, lors de leur acceptation de ce poste, à retourner les pastes revues et endormies les 4 semaines suivant leur réception de l’article. Tenant compte des différents aléas, l’ensemble du processus de lecture d’un article prend de 4 à 5 mois et demi.

The reviewers analyse the article on the basis of the following criteria:
- it concerns a particular field of specialist interest
- it regards a general subject in the ambit of the topics of the journal (considering the interest of its readers)
- quality of the content
- quality of the form.
The reviewers point out mistakes in methods, results, interpretation («critical points»). The Authors will correct the different points and report the requested explanations. The corrections or explanations reported have to be approved by the same reviewers. The reviewers underline the relevant points that come from the discussion and leave the Authors the freedom to report upon subjects that remain unclear or open to discussion. The reviewers are invited to make any proposal to improve the quality of the article: add tables, other presentation of results, references, details about methods, etc... The Authors can disregard the reviewers’ suggestions, otherwise it will be the responsible editor to evaluate the quality level of the article submitted for publication. Each reviewer gives his opinion as follows:
- accepted exactly as it is
- accepted if the Authors consider the reviewers’ remarks unacceptable (under form and content point of view).
The same reviewers can be asked to reconsider the article and to be reinvited for a second review to the same reviewers.
Final decision about publication to the article?
The Editors generally follow reviewers’ opinion. Sometimes, they may disagree on reviewers’ remarks and decide to publish or not the article.
All objections upon the decision to publish the article against the opinion of the reviewers:
1° can give place to
- a letter to the Editor regretting the article in question. The Authors will then take into consideration the points not evaluated in their corrected article;
- an editorial which will be evaluated by the Editor-in-Chief for publication;
2° can be pointed out at the meeting of the Editorial Board. Time required for a review process?
The reviewers should return the reviewed article within 4 weeks from the time they receive the article. Considering the different steps, the review process will take altogether from 4 to 5 months and half.

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31 – p 66 abst

Antioxidants
– Complementary therapy of chronic LE by and Radical scavengers
20 – p 154-155 abst

Arthritis (rheumatoid, psoriatic)
– Lymphedema and: about 4 cases
20 – p 123-128

Articular (osseous)
– Associated pathologies in LE and treatments
14 – p 59-60
– Ankle function impairment in LE
27 – p 71-73

ARDS
– Diagnosis of by scintigraphy bedside measurement of pulmonary albumin flux
20 – p 148 abst

Bacteria (also see erysipelas, inflammatory reactions...)
– Bacterial factors in progression
20 – p 102 abst

Benzopyrones
– And LE: meta-analysis
24 – p 111 abst

Breast
– Surgery and post-mastectomy LE
14 – p 61-64
– Lymphedema of the Breast
20 – p 147 abst
– “p”3N stage in B cancer: internal mammary lymphangiographic data
20 – p 148 abst
– Impact of LN local control on survival in B cancer
24 – p 109 abst
– Sentinel lymph node in cancer: experience of Border’s Institute
26 – p 53 abst
– Role of scintimammography in cancer
26 – p 53 abst

Cholebit
– Skin in lary LE and post-thrombotic S
13 – p 1-10

Children
– Treatment by and MLD in lary and lary LE in of lymphedema
14 – p 51-58
– Lymphosclerosis of Lary LE in
22 – p 58-63

Chyle, chylous, chyliferous
– Reflux: fistula in duodenum operated
15 – p 79-81
– Physiopathology of vessels in dogs and human
16 – p 95-98
– Chylorrhea and chylomegaductus after thoracic Surgery
23 – p 74-77
– The morphofunctional effects of the thoracic duct Ligature in the dog
24 – p 119 abst
– Is lymphography useful in operative management
26 – p 55 abst

– Therapeutical and diagnostic procedure in chylous and chylous reflux in the pleura in adults
26 – p 56 abst
– Therapy of chylous ascites using Denver peritoneo-venous shunt: case report
26 – p 57 abst
– Chylotysis and pulmonary lymphangiectasia
31 – p 57 abst
– Auxiliary chileuroly after sentinel node biopsy
31 – p 67 abst

Collateralisation
– The upper limb
13 – p 11-18

Combined physical therapy
– Lymphatic capillary pressure and network extension in pts with LE before and after
20 – p 149 abst
– Treatment of lary lower limb LE according to Fokkink: results
22 – p 52-55
– Of LE
26 – p 48 abst

Compression therapy, intermittent sequential (preostherapy)
– Treatment by and in lary and lary LE in children
14 – p 51-58
– And MLD in primary LE of the legs
17/18 – p 65 abst
– Interruption in LE: evaluation of 2 methods
19 – p 87-90
– Semiquantitative evaluation of in LL LE using Lymphoscintigraphic techniques
27 – p 63-65

Computed-Tomography
– Non invasive diagnostic approach and therapeutic Implications in phlebo-lymphedema
20 – p 103-108

Congestual
– Vater-Pacini corpuscles in LN in lymphangioedema-displesias
25 – p 14-16

Contractility (lymphatic)
– A literature review
14 – p 65-72
– Modulation of by direct electrostimulation in vivo
17/18 – p 3 abst
– The effects of direct and transcutaneous electrostimulation on the of LV in vivo
20 – p 150 abst
– Study of the spontaneous in rat mesentery
25 – p 17-20
– Role of arachidonic acid metabolites in
31 – p 68 abst

Cyclic
– Study of capillary filtration and lymphatic lymphangiography in cyclic edema and diabetes
15 – p 75-78
– Increased capillary permeability and variable Lymphatic response in the cyclic shock S
20 – p 147 abst
22 – p 64-65

Dermatitis
– Congestive and erysipelas
26 – p 49 abst

Development
– Of LV anastomosis of the heart and pericardium
19 – p 69-54

Diabetes
– Study of capillary filtration and lymphatic lymphangiography in cyclic edema and diabetes
15 – p 75-78
Kikuchi
- Report of 3 cases

26 -- p 54 abst

Laluds’ Test
- Study of capillary filtration and lymphatic resorption in cyclic edema and diabetes

15 -- p 75-78
- Effect of MLD on idiopathic orthostatic edema

20 -- p 117-122
- Clinical and physiological interest

21 -- p 22-26
- Increased capillary permeability and variable lymphatic resorption in the cyclic shock syndrome of Leg

20 -- p 147 abst
- In edema induced by Donuctace

24 -- p 149 abst
- Lymphoscintigraphy and in the management of LLE

25 -- p 26 abst
- The airflight related edema

31 -- p 62 abst

Laparoscopic lymphadenectomy
- Safety and in accuracy

24 -- p 100 abst
- In uterine malignancy

24 -- p 109 abst

Laser
- And lymphatic microsurgery

17/18 -- p 15-18
- Lymph flow after application of and electric Massager

20 -- p 145 abst
- Low level laser therapy as a cost effective treatment for chronic 2ary LE

20 -- p 149 abst
- Doppler in prevention of 1ary and 2ary LE

27 -- p 66-70
- Lymphoscintigraphy and laser Doppler in LE: prognostic values in the prevention of 1ary and 2ary kind

31 -- p 62 abst

Lipedema, lipo-lymphedema
- Imaging methods in the differential diagnosis between and

20 -- p 152 abst
- And Lymphostasis

20 -- p 152-153 abst

Lipolysis
- And lymphatic vessels

20 -- p 153 abst

Liposonction
- Concept in limb lymphedema treatment

32 -- p 75-76

Literature
- A literature review of LV contractility

14 -- p 65-72
- Critical analysis of on Lymphoscintigraphic investigations in LE

21 -- p 1-9

LPG
- Systems and lymphatic activity

20 -- p 151 abst

Lung
- Enzyme histochemical study of lymphatic vascular system

15 -- p 89-93
- Origin and embryonic growth of lymphatics of heart and lung in human

16 -- p 99-100
- Lymphatic drainage of the human lung

17/18 -- p 35 abst

Lymph
- Rheology of Peripheral lymphs

20 -- p 129-134
- Transcutaneous electrical stimulation and flow in human: Lymphoscintigraphic study

20 -- p 135-140
- Flow velocity in single capillaries in health and primary LE

20 -- p 143 abst
- Flow velocity in capillaries measured in a new model using the tail of the nude mouse

20 -- p 145 abst
- Flow after application of laser and electric Massager

20 -- p 145 abst
- Lymphatic pressure in patients with primary LE

20 -- p 145 abst
- Lymphatic capillary pressure and network expansion in pts with LE before and after combined physical therapy

20 -- p 149 abst
- Congestive and oedematous

20 -- p 69 abst
- Certainities and uncertainties over disturbance. Due to venous pathology

26 -- p 49 abst
- Lymphatic flow through scar tissue

30 -- p 29-32
- Flow through lymphatics in scar tissue

31 -- p 69 abst

Lymph Nodes (also see Sentinel LN)
- Reaction to particles injected in the palm, are

17/18 -- p 36 abst
- Transplant

17/18 -- p 67 abst
- Parasitism: drainage of the UL towards

17/18 -- p 64 abst
- Supradihaphragmatic drainage of the LL towards

17/18 -- p 64 abst
- Internal mammary in breast cancer: pN3 staging

20 -- p 148 abst
- Nanoparticles in visualisation of lymphatics and in vivo experiments with activated carbon

20 -- p 148-149 abst
- Venoarchitectonic study of intralymphatic LN

24 -- p 93-96
- Dissection in breast and neck cancer

24 -- p 110 abst
- Metastasis in early gastric cancer: frequency and Prognosis

24 -- p 110 abst
- Pancreatic vipoma with LN

24 -- p 110 abst
- Impact of regional LN control on survival of NSCLC

24 -- p 110 abst
- Mediastinal metastas in NSCLC: incidence of Micrometastas

28 -- p 89-93
- In canceroLOGY

28 -- p 105-108
- Prognostic factors for patients with cervical LN Of unknown primary

28 -- p 105-108
- Correlation of pathologic LN enlargement with Treatment outcome in pts with hepatitis C

29 -- p 6-10
- Color coded duplex sonography in chronic inflammatory and metastatic cervical LN

30 -- p 21-24
- Of the mediastinum with unknown primary site

31 -- p 58 abst

Lymphangioma, lymphangiectasia
- Origin and embryonic growth of lymphatics of heart and lung in human

16 -- p 99-109
- Cystic of the spleen

17/18 -- p 40 abst
- Mediastinal in the adult

20 -- p 152 abst
- Immunohistochemical findings in benign tumors and in a cystic lymphangioma of the ileum

29 -- p 16-19
- Chylous and primary

31 -- p 57 abst
- Lymphangiomas in pediatrics

31 -- p 58 abst
- Turner’s syndrome and lymphangiectasia
dema

31 -- p 66 abst

Lymphangitis (also see inflammatory reactions...)
- Experience in a general hospital

20 -- p 143 abst
- Therapeutic effect of hyperthermia on the Recurrent acute

20 -- p 143 abst
- Hoden of lymphedema post-Lymphedema

20 -- p 143 abst
- Incidence, prevention and therapy of bacterial Infections in women with PE-LLE

20 -- p 147-148 abst

Lymphatic collectors
- Rheology of Peripheral lymph.

20 -- p 129-134
- Inflammatory alterations of lymph capillaries and Prefascial in chronic LE

20 -- p 144 abst

Lymphatic drainage
- Of the upper limb: substitution pathways

13 -- p 11-18
- Of the esophagus

13 -- p 26-30
- Of the thyroid gland

17/18 -- p 35 abst
- Of the heart: lymphoscintigraphic evaluation after ischemia and repulsion

17/18 -- p 44 abst
- Of the human lung: embryonic growth

17/18 -- p 35 abst
- Of the upper limb towards the parasitic vessels

17/18 -- p 44 abst
– Off the lower limbs towards the supra-
Diasphragmatic nodes
– Off the kidney
– Off the large and small intestine
– Off the tongue
– Of the deep lung
– Of the pericardial sac
– Of the human urinary bladder
– Of the vermiciform appendix
– Of the kidneys
– Of the sciatic nerve
– Of the pelvic site in the animal
– Of heart and lungs: similadities and
  differences between pig and man
– Of the heart and lung in the pig
– Contralateral of the head: study on foetus
  subjects
– Of the parietal region in man
– Of the pleural site of the diaaphragm
– Of the shoulder and anterior thoracic wall
  after post-thoracic ULE
– Supraphaortic of the lower limbs
– Of the pleural sites of the animal

Lymplic Microsurgery, surgery
– Aki Laser
– And Therotherapy
– Free Flaps
– Lymph Node transplant
– Lymph Vessel transplant

Lymphoscintigraphic Evaluation
– Evaluation
– Rec受欢迎：anatomical aspects
– State of the art
– Lymphoscintigraphic Evaluation of
  Physiologic evaluation in ULE
– Lymphoscintigraphic Evaluation of
  Noninvasive evaluation in ULE
– In Remains
– Possibilities of direct reconstructive
  interrupted Lymphatic vessels
– Parameters to be considered in L-V
  anastomosis Indications
– Surgical treatment of U/L E
– Microsurgical techniques in L-E

Lymphatic Regeneration
– In the limb reconstructive surgery
– In wounds and human cadaver skin as a
  biologic Dressing?

Lymphatic vessels (also see lymph, microlymphatics)
– Human: Ultrastructure of dermal in chronic
  venous Insufficiency
– The absorbing of trache and esophagus in
  guinea Pig: a histographic and
  ultrastructural Study
– A literature review of lymph capillaries
– Arteries around lymphatic capillaries
– Electron histochemical study of lymphatic
  Capillaries in pancreas

– Pathophysiology of chyliferous vessels
  in dogs and Human: relevance of small
  intestine Transplants
– Origin and embryonic growth of lymphatics
  of heart and lung in human
– Microlymphatic and thromboembolic disease
  in Acute spinal cord injury, skin biopsies
– In vivo electrostimulation of mesenechymal
  Absorbing of the diaaphragm: ultrastructural
  study
– In the pathology of the large and small
  intestine
– Inflammatory alterations of lymph
  capillaries and Prefascial lymph collectors

Lymphoid in chronic LE
– Immunocytochemical demonstration of
  p-selectin in the endothelial wall of
– Nanoparticles in visualization of and
  lymph nodes In vivo experiments with
  activated carton
– The effects of direct and transcutaneous
  electro-Stimulation on the contractile
  activity of L-V
– Lipopecty and lymphatic vessels
– Morphological and ultrastructural
  characteristics of superficial in man
– Lacteal: morphologic special aspects
– Vascular lesions of muscular atrophy
– Control of absorption modalities of verruca
  mors by
– Flow through lymphatics in tissue
– Vascular lesions in muscular atrophy
– Lymphatic and venous changes in
  post Trauma LE of the Lower limbs
– Morphology background for altered function
  of Lymphatics in scleroderma venous
– Secondary healing wound and their
  lymphatics

Lymphography
– Combinations of surgical treatment of

Lymphography
– Complications and side effects
– Is useful in cholangioscopy and

Lymphology
– In the

Lymphoedema (see also elephantitis, phlebolymphoedema)
– Skin healing in primary
– The therapy of
– Lymphedema by MLD and pressureotherapy
  in Troy and Zery LE in children
– Associated endocrin and in treatments
– Post-mastectomy LE: up to the amputation
– The pathologically most relevant changes in
– Correlation of Lymphoscintigrams, immuno-
  histology and pressure-flow parameters
– Cutaneous in LE
– Lymphoscintigraphic abnormalities in child LE
– Primary, treated with MLD and compression
  LE
– Lymphangiitis and: new method of
  therapy
– Wobeneyroph therapy in ophthalmologic
  with
– Intermittent compression of: evaluation of
  W2 Methods
– Phlebo:-non-invasive approach and
  therapeutic ligation
– And arthritis: about 4 cases
– Neu: infectious inflammatory reactions
  during

18
HOW TO PERFORM ULTRASONOGRAPHIC VISUALISATION OF LYMPHATIC VESSELS? D. MATTER

High frequency ultrasonography at 12 MHz was used to depict the normal and abnormal lymphatic vessels of the limbs using an adapted technique.

In normal subjects, the lymphatic network could easily be seen as echogenic lines arranged in a network covering the entire hypodermis, between the adipose lobules. The lymphatic collectors running in the fascial area are longitudinally structured with one or two distinct walls limiting the lumen, crossing or surrounding the lymph nodes at the root of the limb. In case of lymphedema, US can demonstrate the presence or absence of lymphatic vessels, their dilatation in a characteristic honeycomb pattern and their possible compressibility, and look for thickening of the dermis or hyperechogenicity of the fat lobules in the hypodermis.

Lymphoscintigraphy (also see Sentinel Lymph Node/SLN) is an alternative investigation protocol for the Evaluation of lower LE.

- Of the limbs which protocol?
  - Lymphscintigraphy: utility.
  - Lymphovenous anastomosis pathways.
  - Of the internal mammary node: only
  - Of the Lower Limbs.
  - Visualization of Suprapatellar LN
POSTERS SESSION

SUNDAY 17TH: 09.30-10.30

First author | Country | Title
--- | --- | ---
P1 | Beaujean M. | Belgium | Iatrogenic surgical lesions of lymphatic structures of the lower limbs
P2 | Beaujean M. | Belgium | Injuries by percutaneous high pressure injection
P3 | Benda K. | Czech Republic | Modified combined decongestive physiotherapy in head and neck lymphedema management
P4 | Elia K. O. | Czech Republic | Negative pressure, lymphatics and blood vessels
P5 | Forner-Cordero I. | Spain | Facial lymphedema in Melkerson – Rosenbaehl syndrome
P6 | Hamadé A. | France | Oedema of the hands in intravenous cocaine addict patients
P7 | Keeley V. | United Kingdom | A qualitative investigation of the lived experience of lymphedema
P8 | Keeley V. | United Kingdom | The development of a condition-specific quality of life measure for lymphedema (LYMQOL)
P9 | Kirici I.C. | Germany | Evaluation of normal mesorectal lymph nodes
P10 | Kirici I.C. | Germany | Topography of the lymphatics of the breast based on the visible human
P11 | Michelin S. | Italy | Lymphoscintigraphy and lymphedema: from prevention to prognosis
P12 | Michelin S. | Italy | Combined physical treatment in patients with lymphedema: which and how?
P13 | Okada E. | Japan | Lymphangiogenesis and hemangiogenesis in lesions of myocardial infarction
P14 | Rada I.O. | Romania | Phleboedema vs lymphedema – Material, method (Part I)
P15 | Rada I.O. | Romania | Phleboedema vs lymphedema – Results (Part II)
P16 | Rada I.O. | Romania | The compulsory vascular lymphatic load vs the optional load – debate, conclusions (Part III)
P17 | Yamu Y. | Japan | Transcutaneous oxygen partial pressure in unilateral lymphedema
P18 | Theys S. | Belgium | A 30 or 90 mmHg – manual or pneumatic – drainage in primary lymphoedema: A comparative plethysmographic study
P19 | Thibaut G. | France | The duke health profile: a scale to measure the quality of life
P20 | Venken R. | Belgium | Early results after lymphatic-venous derivate microsurgery for upper limb lymphedema: my personal experience
P21 | Wald M. | Czech Republic | Lymphatic vessel “overflow” on the arm after axillary dissection
P22 | Wald M. | Czech Republic | Dissection of sentinel node in breast cancer – condicio sine qua non?
14:10 15:55
Free communications:

14:10
"Roentgenostatic effect on lymphatic pumping in diabetic rats. What is the role of endothelial dysfunction?"


14:25
"Lymphatic dysplasia of the newborn: role of lymphoscintigraphy."

Belli E, Boschi E, Boccadoro F, Taddi G, Serra G, Campisi C - Italy (C6)

14:40
"Lymphedema following the surgical treatment of breast cancer: evaluation of prophylactic measurements."

Boccadoro F, Zilli A, da Rio E, Uretta E, Campisi C - Italy (C7)

14:55
Q&A and discussion by Bourgeois P. to finish the session.

Session III - Lymphovenous diseases and dermatology

15:30-16:35
1st part: Skin changes

15:30
Q&A by de la Brassine M. (Belgium) to introduce the session and the lecture of Fleur M. (Belgium)

15:35
Fleur M. lecture (L7): Are there specific skin changes due to lymphatic microangiopathy linked to severe chronic venous insufficiency?

15:50
Q&A by Fleur M. to introduce the lecture of de la Brassine M.

15:55
de la Brassine M. lecture (L8): How to treat skin changes due to lympho-venous incompetence?

16:10-16:25
Free communications:

16:10
"Histochemical demonstration of regenerating lymphatic vessels in the wound healing."

Kan S., K.R.C. - Japan (C8)

16:25
Q&A and discussion by Fleur M. and de la Brassine M. to finish the session.

End of the day program

GENERAL ASSEMBLY OF THE GEL

18:00
Transfer bus to Novotel

20:00
Reception - Gala Dinner, Auto-World

Sunday 17th October

08:30
Q&A by de la Brassine M. to introduce the lecture of Obzorski W. (Poland)

Oberzelski W. lecture (L9): Bacterial infection

08:55
Q&A by Fleur M. to introduce the lecture of Okhuma M. (Japan)

Okhuma M. lecture (L10): Parasitic infection

09:20
Q&A and discussion by Fleur M. and de la Brassine M. to finish the session.

10:30
Coffee break and poster session

Session IV - Peripheral lymphoedema:
from diagnosis to treatment

10:30
Q&A by Wastech T.C. - (Belgium) to introduce the session.

Campisi C. lecture (L11): Lymphatic microangiopathy: from diagnosis to treatment

10:50-11:20
Free communications:

"An early (latent) stage of secondary arm lymphedema and its successful treatment with exogenous progesterone"

Wald M, Bradvova M, Krivova M, Adamec J, Zemanovova R - Czech Republic (C9)

"Five years follow up in primary and secondary lymphedema: our experience"

Michelini S, Fasila A, Mosena G. - Italy (C10)

"Quality of life and treatment for the primary breast and neck and arm after Neck dissection"

Cleavage cases Wasereth J.C., Ledoc O.

"A specific scale for patients with IFL"

11:55
Award ceremony for the best poster presentation

Honour President: Benajmin M. (Belgium), Hidden G. (France), Ledac A. (Belgium)

12:00
Final conclusions

GEL President, Bourgeois P. Congress Presidents, Wautrecht J.C., and Ledoc O.

12:45
Congress Secretary postage:

F. WILJUPTE - JP, BELGRADO
CUB - Hospital BRAEME - Department of Vascular Diseases
Route de Louvain, B-1780 BRUSSEL
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BICSWIFT: GBEBEBBB

Post-chronic syndrome:

Skin healing

13 - p 1-10

Pressure:

Lymphatic capillary pressure in patients with IFL

20 - p 145 abt

Has MLD as effect on infrarenal pressure

30 - p 25-27

Physical model to study the exerted by presso-therapy machines

31 - p 65 abt

Prevention:

Or subclinical character

26 - p 50 abt

Or possible clinical character

26 - p 50 abt

Or LE: possibilities and failures

26 - p 50 abt

Or Doppler in prevention of IFL

27 - p 66-70

Lymphoangiography and laser Doppler in LE: prognostic values in the Prevention of IFL

31 - p 62 abt

Or LE: role of microsurgery

31 - p 64 abt

Protein-losing enteropathy:

Chylous reflux and fistula in duodenum operated

15 - p 79-81

p-selectin:

Immunocytochemical demonstration of in the Endothelial wall of lymphatic vessels

20 - p 146 abt

Psychosocial:

Questioning for the assessment of factors affecting LE patients

20 - p 150 abt

Profile of LE patients

26 - p 52 abt

Pulmonary ARDS

Diagnosis of ARDS by scintigraphy besides Measurement of pulmonary albumin flux

26 - p 149 abt

Quality of life:

And swallowing of the head and neck and arm after Neck dissection

28 - p 109-111

Effect of MLD for head and neck ca. patients

28 - p 112-114

A specific scale for patients with LE

31 - p 70 abt

Reflux:

Chylous: fistula in duodenum operated

15 - p 79-81

Resorption:

The study of capillary filtration and lymphatic Resorption in cyclic edema and diabetes

15 - p 75-78

Review:

A literature review of LE contractility

14 - p 65-72

Critical analysis of the literature on LE scintigraphic investigations in LE

21 - p 1-9

Rheology:

Of Peripheral lymph.

20 - p 129-134

Scars:

Skin keloids in IFL and post-

13 - p 1-10

chronic lymphatic

16 - p 51 abt

Flow through lymphatics in tissue

30 - p 29-32

Scintigraphy (see Lymphoscintigraphy, Landis's text)

Sentinel lymph node:

For diagnosis of occult micrometastasis in oral cancer

25 - p 29 abt

In early diagnosis of stage III in carcinous melanomas

25 - p 29 abt

In breast cancer: experience of Bondet's Institute

26 - p 52 abt

Intra/and intramammary injections

36 - p 52 abt

Guided fine needle aspiration cytology of SLN in head and neck cancer

28 - p 93-96

Advantage of NSGCL resection

31 - p 58 abt

Biopsy for breast cancer patients

31 - p 59 abt

In carcinous melanomas

31 - p 59 abt

In carcinous melanoma

31 - p 62 abt

Auxiliary chylomas after biopsy

31 - p 67 abt

Lymphs as carrier of blue dye for the identification

31 - p 67 abt

Secondary Upper Limb Edema (see also Lymphedema)

Lymphoscintigraphic Validation of MLD

17/18 - p 37 abt

Changing incidence with time or technique

17/18 - p 80 abt

Surgery or Radiotherapy in breast cancer

17/18 - p 41 abt

Lymphoscintigraphic evaluation of semi-rigid Bandages

17/18 - p 45 abt

Partner training and education in LE management can reduce chronic

20 - p 150 abt

Selenium:

A possibility to avoid skin infections in LE

20 - p 153-154 abt

Skin (also see dermatitis)

Healing in IFL and post-chronic syndrome

13 - p 1-10

Ultrastructure of dermal lymphatic vessels in chronic venous insufficiency

13 - p 19-24

Microlymphatic and thromboendothelial disease in Acute spinal cord injury, skin biopsies

16 - p 115-119

Changes in lymphedema

20 - p 142 abt

Forearm skin capillarity density in hanc post-Mastectomy edema

20 - p 145 abt

Selenium, a possibility to avoid infections in LE

20 - p 153-154 abt

The development of a photographic guide to Changes and problems in LE

20 - p 154 abt

Study of the laser Doppler flux in limb with LE

24 - p 111 abt

Pathogenesis of acute localized inflammation: immune-Histochmical study on skin biopsies

25 - p 25 abt

Skin microcirculation modifications in upper limb LE

31 - p 63 abt

Spleen:

The white pulp of the hoon

31 - p 48-52

Sport:

Lymphoscintigraphic evaluation of Volley-Ball Players

17/18 - p 43 abt

Chronic period LE in a professional female cyclist

26 - p 55 abt

Staging:

Accurate assessment of LE subsequent to cancer

25 - p 1-10

Stomatora:

Lower limb LE and

26 - p 54 abt

Stemmer:

Diagnostic value of stemmer's sign

24 - p 112 abt

Stewart-Treves Syndrome

Immunochemistry in 3 cases

24 - p 115 abt
XXX Congress of European Lymphology Group
Brussels, 16-17 October 2004

FINAL PROGRAM

SATURDAY 16th OCTOBER

08:00-08:30 Registration
08:30 Welcome/Introduction
G. Leduc, J.-C. Vautre, Congress Presidents
08:45 Session I - Content of Lymphedema
08:45 Questions/Answers (*) by Pissas A. (France) to introduce the lecture of Földi M. (Germany)
08:50 Földi M. lecture (L1):
What is the composition of lymphedema could explain abnormalities observed in different imaging techniques?
09:10 Q/A by Campisi C. (Italy) to introduce the lecture of Broson H. (Sweden)
09:15 Broson H. lecture (L2): Lipoasuction in lymphedema treatment: what is removed?
09:40 Q/A and discussion by Pissas A. and Campisi C. to finish the session
09:45 Coffee break
12:05-13:30 Lunch
10:15 Session II - Imaging of lymphatics and peripheral lymphedema
10:15 Q/A by Fumière E. (Belgium) to introduce the lecture of Matter D. (France)
10:20 Matter D. lecture (L3):
How to perform ultrasonographic visualisation of lymphatic vessels?
10:30 Q/A by Pecking A. (France) to introduce the lecture of Bourgeois E.
10:45 Bourgeois E. lecture (L4):
How and when to perform a lymphoscintigraphy?

(*) Q/A refers to Questions/Answers by means of the voting system.

10:35 Q/A by Fumière E. to introduce the lecture of Michelini S. (Italy)
10:40 Michelini S. lecture (L4):
Classification of lymphedema by ultrasonography: is there a real one? What do we classify?
10:55 Free communications:
10:55 "Computerized Tomography in Lymphedema: diagnostic and therapeutical implications",
Michelini S., Fatte A., Moneta G., Paroni Sterioli G.L., Rosso R. - Italy (C1)
10:55 "Usefulness of proton MR spectroscopy in lymphedema",
Fumière E., Leduc O., Montesot J., Desmesre R. - Belgium (C2)
10:55 "Normal hand and neck lymph nodes topography based on the dataset of the visible human",
Kirchutz C., Qvansler S., Bralou I. - Germany and Sweden (C5)
10:55 "Growing discrepancy of angiodysplastic lower limb in pediatrics: Radiological measurement",
Papaoneck C.M., Barbouze M.L., Pico P. - Argentina (C4)
10:55 Q/A and discussion by Fumière E. to finish the session


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XXX Congress of European Lymphology Group
Brussels, 16-17 October 2004

FINAL PROGRAM

SATURDAY 16TH OCTOBER

08:00-08:30
Registration

08:30
Welcome/Introduction
P. Bourgeois, GEL President
G. Leduc, J.-C. Wautrecht, Congress Presidents

Q&A by Fumiere E. to introduce the lecture of Michelin S. (Italy)

08:45
Session I - Content of Lymphedema

Q&A by Pissas A. (France) to introduce the lecture of Földi M. (Germany)

Földi M. lecture (L1):
What is the composition of lymphedema caused explain abnormalities observed in different imaging techniques?

09:10
Q&A by Campisi C. (Italy) to introduce the lecture of Brozon H. (Sweden)

09:15
Brolson H. lecture (L2):
Liposuction in lymphedema treatment: what is removed?

09:40
Q&A and discussion by Pissas A. and Campisi C. to finish the session

09:45
Coffee break

12:05-13:30 Lunch

10:15
Session II - Imaging of lymphatics and peripheral lymphedema

Q&A by Bourgeois P. (Belgium) to introduce the lecture of Behar A. (France)

10:15
Behar A. lecture (L3):
Lindis test in the 21st century: which place?

10:20
Q&A by Pecck A. (France) to introduce the lecture of Bourgeois P.

10:20
Bourgeois P. lecture (L3):
How and when to perform a lymphoscintigraphy?

*Q&A refers to Questions/Answers by means of the voting system.

THE EUROPEAN JOURNAL OF LYPHEMOLOGY - Vol. XII - No. 41 Sup. C I - 2004
14:10-15:55
Free communications:

"Rosa-estatin effect on lymphatic pumping in diabetic rats. What is the role of endothelial dysfunction?"
14:25
"Lymphatic dysplasia of the newborn: role of lymphoscintigraphy."
Bellou C, Bonisi E, Boccardo F, Taddei G, Serra G, Campisi C - Italy (C6)
14:40
"Lymphedema following the surgical treatment of breast cancer: evaluation of prophylactic measurements."
Boccardo F, Zilli A, De Rin E, Eretta C, Campisi C - Italy (C7)
14:55
Q&A and discussion by Bourgeois P. to finish the session.

15:05 Coffee break

15:30 Session III - Lymphovenous diseases and dermatology

15:30-16:35 1st part: Skin changes

15:30 Q&A by de la Brassine M. (Belgium) to introduce the session and the lecture of Fleur M. (Belgium)
15:35 Fleur M. lecture (L7):
"Are there specific skin changes due to lymphatic microangiopathy linked to severe chronic venous insufficiency?"
15:50 Q&A by Fleur M. to introduce the lecture of de la Brassine M.
15:55 de la Brassine M. lecture (L8):
"How to treat skin changes due to lymphocvenous insufficiency?"
16:10-16:25 Free communications:

"Histochemical demonstration of regenerating lymphatic vessels in the wound healing."
Kan S., Li K C - Japan (C8)
16:25 Q&A and discussion by Fleur M. and de la Brassine M. to finish the session.

16:35 End of the day program

GENERAL ASSEMBLY OF THE GEL

18:00 Transfer bus to Novotel

20:00 Reception - Gala Dinner, Auto-World

SUNDAY 17TH OCTOBER

08:30 Q&A by de la Brassine M. to introduce the lecture of Obweszewski W. (Poland)
08:35 Olszewski W. lecture (L9):
"Bacterial infection"
08:55 Q&A by Fleur M. to introduce the lecture of Obweszewski M. (Japan)
09:00 Ohkuma M. lecture (L10):
"Parasitic infection"
09:20 Q&A and discussion by Fleur M. and de la Brassine M. to finish the session
09:30 Coffee break and poster session

10:30 Session IV - Peripheral lymphedema: from diagnosis to treatment

10:30 Q&A by Wastech J-C. (Belgium) to introduce the session
10:35 Campisi C. lecture (L11):
"Lymphatic microangiopathy: from diagnosis to treatment"
10:50-11:20 Free communications:

"An early (latent) stage of secondary arm lymphedema and its successful treatment with exogenous prostaglandins."
Wald M., Boudjelal M, Križáč H., Adamec J., Zemanová R. - Czech Republic (C9)
11:05 "Five years follow up on primary and secondary lymphedema: our experience."
Micheloni S., Failla A., Moneta G. - Italy (C10)
11:20 Q&A by Ledoc O. (Belgium)
11:25-11:50 Clinical cases Wastech J-C., Ledoc O.
11:50 Q&A and discussion by Ledoc O. and Wastech J-C.

11:55 Award ceremony for the best poster presentation

Honour Presidents:
Benjamin M. (Belgium), Hidden G. (France), Ledoc A. (Belgium)

12:00 Final conclusions

GEL President, Bourgeois P., Congress Presidents, Wastech J-C., and Ledoc O.

Post-chronic syndrome

- Skin healing
  13 - p 1-10
Pressure
  - Lymphatic capillary pressure in patients with 12 day LE
  20 - p 145 a
  - Has MLD as effect on intraarterial pressure
  30 - p 25-27
  - Physical model to study the exerted by press-erTherapy machines
  31 - p 65 a
Prevention
  - Of subclinical LE
  26 - p 50 a
  - Of pleocrits
  26 - p 50 a
  - Doppler in prevention of 1 day and 2 day LE
  26 - p 50 a
  - Lymphoscintigraphy and laser Doppler in LE: prognostic values in the Prevention of 1 day and 2 day LE
  31 - p 62 a
  - Of LE: role of microusurgery
  31 - p 64 a
Protein-losing enteropathy
- Chylous reflux and fistula in duodenum operated
  15 - p 79-81
p-selectin
- Immunochemical demonstration of in the Endothelial wall of lymphatic vessels
  20 - p 146 a
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- Questionnaire for the assessment of factors affecting
  LE patients
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Profile of LE patients
  26 - p 52 a
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- Diagnosis of ARDS by scintigraphy beside measurement of pulmonary albumin flux
  20 - p 149 a
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  28 - p 109-111
- Effect of MLD for in head and neck ca. patients
  28 - p 112-114
- A specific scale for patients with LE
  31 - p 70 a
Reflux
- Chylous: fistula in duodenum operated
  15 - p 79-81
Resorption
- Of capillary filtration and lymphatic resorption in cyclic edema and diabetes
  15 - p 75-78
Review
- A literature review of LE contractility
  14 - p 65-72
- Critical analysis of the literature on LE's investigations in LE
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- In early diagnosis of stage III in cutaneous melanomas
  25 - p 29 a
- In breast cancer: experience of Bordet's Institute
  26 - p 52 a
- Intraoral and intramammary infections
  26 - p 52 a
- Guided fine needle aspiration and biopsy of cutaneous head and neck cancer
  28 - p 93-96
- Advantage of for NSCLC resection
  31 - p 58 a
- Biopsy for breast cancer patients
  31 - p 59 a
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  31 - p 62 b
- In cutaneous melanoma
  31 - p 62 b
- Axillary chylitis after biopsy
  31 - p 67 a
- Lipomas as centers of blue dye for
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- Lymphoscintigraphic validation of MLD
  17:18 - p 37 a
- Changing incidence with times or techniques
  17:18 - p 90 a
- Surgery or Radiotherapy in breast cancer and adenocarcinomas
  17:18 - p 61 a
- Lymphoscintigraphic evaluation of semi-rigid Bandages
  17:18 - p 45 a
- Partner training and education in LE management can reduce chronic
  20 - p 150 a
- Selenium
  20 - p 153-154 a
Skin (also see dermatitis)
- Healing in lary LE and post-chronic syndrome
  13 - p 1-10
- Ultrastructural study of lymphatic vessels in chronic venous insufficiency
  13 - p 10
- Microlymphatic and lymphoeconomic disease in Acute spinal cord injury, skin biopsies
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- Forearm skin capillary density in hemiplegia
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- Selenium, a possibility to avoid infections in LE
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- Pathogenesis of acute localized inflammation: immune-Histohemical study on skin biopsies
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- Immunohistochemistry in 3 cases
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POSTERS SESSION
SUNDAY 17th: 09:30-10:30

First author | Country | Title
--- | --- | ---
P1 | Beaugean M. | Belgium
P2 | Beaugean M. | Belgium
P3 | Benda K. | Czech Republic
P4 | Elisa O. | Czech Republic
P5 | Forner-Cordero I. | Spain
P6 | Hamadé A. | France
P7 | Keeley V. | United Kingdom
P8 | Keeley V. | United Kingdom
P9 | Kiricuci I.C. | Germany
P10 | Kiricuci I.C. | Germany
P11 | Michelin S. | Italy
P12 | Michelin S. | Italy
P13 | Okada E. | Japan
P14 | Rada I.O. | Romania
P15 | Rada I.O. | Romania
P16 | Rada I.O. | Romania
P17 | Yamu Y. | Japan
P18 | Theys S. | Belgium
P19 | Thibaut G. | Belgium
P20 | Venken R. | Belgium
P21 | Wald M. | Czech Republic
P22 | Wald M. | Czech Republic

Moesenteric lymphatics
- In vivo direct electrostimulation
- Dissection of
- Study of the spontaneous contractility in
- 17/18 - p. 38 abst
- 24 - p. 116 abst
- 25 - p. 117-20

Microcirculation
- A new model of for the physiology of MLD
- Changes in chronic venous insufficiency
- LE and study of 23 cases
- Skin microcirculation modification in upper limb LE
- 17/18 - p. 41 abst
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- 31 - p. 63 abst

Microlymphatics
- Microlymphatic and thromboembolic disease in Acute spinal cord injury, skin breakdown
- In Thrombo-Emboletic Disease
- 16 - p. 115-119
- 17/18 - p. 36 abst

Neurogenic edema
- Microlymphatic and thromboembolic disease in Acute spinal cord injury, skin breakdown
- In patients with arm haemangia
- 16 - p. 115-119
- 17/18 - p. 37 abst

Neurolymphatics
- Brachial plexus in post-surgical leg
- Microlymphatic and thromboembolic disease in Acute spinal cord injury, skin breakdown
- 16 - p. 115-119
- 17/18 - p. 37 abst

Orchidectomy
- Study of capillary filtration and lymphatic Resorption in cicatricial edema and diabetes
- 15 - p. 75-78

Partner training and education
- In LE management can reduce chronic
- 20 - p. 120 abst

Perivascular
- Fibers around lymphatic capillaries
- Pig's Ring
- Therapeutic effect and rationale of
- 15 - p. 83-87
- 24 - p. 112 abst

Phleboedema
- Non invasive diagnostic approach and therapeutic Implications
- 20 - p. 103-108

Phlebo-lymphedema
- Non invasive diagnostic approach and therapeutic Implications
- The strategy of the treatment of edemas in
- 20 - p. 103-108
- 20 - p. 144 abst

Physiology
- Physiopathology of chylferose vessels in dogs and Human
- Effect of MLD on quality of life in head
- 16 - p. 95-98
- 28 - p. 112-114
- 29 - p. 11-15
- 30 - p. 25-27
- 30 - p. 25-27

Phlebography
- Objective of MLD in post-thrombotic Edema
- 17/18 - p. 44 abst

Post-thrombotic edema
- Phlebographic objectivation of MLD in
- 17/18 - p. 44 abst
How to Perform Ultrasonographic Visualisation of Lymphatic Vessels of the Limbs Using an Adapted Technique.

D. Matter

High frequency ultrasonography at 12 MHz was used to detect the normal and abnormal lymphatic vessels of the limbs using an adapted technique.

In normal subjects, the lymphatic network could easily be seen as echogenic lines arranged in a network covering the entire hypodermis, between the adipose lobules. The lymphatic collecting vessels of the fascial area are longitudinally structured with one or two distinct walls limiting the lumen, crossing or surrounding the lymph nodes at the root of the limb. In case of lymphedema, US can demonstrate the presence or absence of lymphatic vessels, their dilatation in a characteristic honeycomb pattern and their possible compressibility, and look for thickening of the dermis or hyperreflectivity of the fat lobules in the hypodermis.

Classification of Lymphedema by Ultrasonography: Is There a Real One? What Do We Classify?

S. Michelin

The Diagnosis of Lymphedema Is Clinical. High Resolution Echography Gives Us Some Information about the Localization of Glands, Its Extension, the Presence and Extent of Edema in Supra- and Subcutaneous Tissues and the Liquid and/or Fibrous Component.

The Parameters to Consider During the Examination Are the Supra- and Subcutaneous Tissue Thickness, the Echogenicity and the Tissue Compressibility.

With the Echographic Examination We Can Observe:

- A Prevailing Ipoecogenic Corresponding to the Fluid Component (Frame A);
- A Simultaneously Presence of Ipoecogenic and Hipoecogenic Zones of the Tissues (Frame B);
- A Prevailing Ipoecogenic of the Tissues Corresponding to the Fibrous (Frame C).

During the Examination We Can Observe a Prevailing and Homogeneous Cerebral Fissure Ipoecogenic Corresponding to Water-Spreading inside the Tissues, Sometimes with an Intermixture of Lymphatic Lakes and/or Canals (Frame A). In These Cases a Compressibility of Tissue Determines a Substantial Increase of Suprafascial Thickness.

In Other Cases We Observe a Distinguishable Ipoecogenicity of the Suprafascial Thickness Caused by Presence of Water with Several Hipoecogenic Zones or Areas Due to Fibrosis of Tissues. It’s Possible in These Cases to Observe Lymphatic Lakes and/or Canals. The Tissue Compressibility is Possible but the Decrease of Suprafascial Thickness is Less (Frame B).

In Other Cases We Observe More Diffuse Hipoecogenic Suprafascial Stripes and/or Zones Caused by Fibrotic Tissue. In These Cases There is a Poor Ipoecogenic Component. It’s Possible to Observe Also Some Lymphatic Lakes or Canals. Very Poor, or Absent, It Is, in These Cases, the Tissue Compressibility (Frame C).

Normal Subjects Present in Both of the Two Limbs a Coinciding Echogenicity and Thickness of Supra- and Subcutaneous Tissue. At Various Level of Suprafascial Thickness We Can See an Interposition of Ipoecogenic Strips Corresponding to the Fat Tissue.

In All Patients with Echographic Frame A We Observed a Remarkable Decrease, After Treatment, of Suprafascial Tissue Thickness.

In Patients with Echographic Frame B We Observed, After Treatment, a Decrease of Ipoecogenic Component (Corresponding to the Fluid Component of Oedema). In All Cases the Echographic Frame was Involved after Treatment.

In the Patients with Echographic Frame C We Observed a Very Low Decrease of Ipoecogenic Component of Suprafascial Thickness.

Under the Clinical Point of View the Reversibility Is Completely Possible for the Frame A, Partially for the Frame B and Very Low for the Echographic Frame C.

So, the High Resolution Echography Confirms Us the Diagnosis of Lymphedema and Gives Us Information about the Monitoring of the Results of the Treatment and Also about the Prognosis.

- Bacillary Factors in Progression of Lymphedema
- Vascular Changes
- Lymphoedema of Post-Mammary Gland
- Inflammatory Alterations of Lymphatic Capillaries and Preferential Lymphatic Collectors in Chronic Lymphoedema
- Exoprotein Edema in LE
- Lymphatic Velocity in Single Lymph Capillaries in Health and Primary LE
- Lymphatic Pressure in Patients with Laryngeal LE
- Of the Breast
- Of the Upper Limb: Approach of Actual Frequency and Importance of Infections
- Lymphatic Capillary Pressure and Network Extent in LE Before and After CPT
- Low Level Laser Therapy as a Cost Effective Treatment for Chronic 2nd LE
- Partner Training and Education in LE Management Can Reduce Chronic 2nd Arm LE
- Combined Conservative Treatment of Peripheral LE
- Surgical Treatment of Laryngeal LE
- Microsurgical Techniques in LE Treatment
- Hemodinamic Alterations in PT LE
- Complementary Therapy of Chronic LE by and Antioxidants and Radical Scavengers
- Possible Systemic Effects of Free Radicals and Their 2nd Products in Chronic LE
- lHematochemical Parameters in LE
- A 3 phase L-Spetic Investigation Protocol for the Evaluation of Lower LE
- Lymphoscintigraphic Assessment of MLD in 47 Secondary LE
- Anatomical and Lymphoscintigraphic Evaluation of the Lower Extremity According to Presence of Water
- And Relapsing Infections: histopathological Findings in laryngeal and 2nd LE and in Patients Without LV disease
- New method to measure subtle changes in Lower Limb WV, a useful tool for LE assessment
- Renin-angiotensin and LE: meta-analysis
- Rate and size of ULW after DE treatment
- Axillary lymph nodes
- Quality of life in treating LE
- Prognostic impact of axillary SW
- Complications of
- Possible scoliosis of LE: surgical treatment
- Chronic petechial in a professional female cyclist
- False clinical signs of
- Semiquantitative evaluation of sequential intermittent Compression therapy in LE: Lymphoscintigraphic techniques
- Axial function impairment in LE
- Excessive extension and/or axillary dissection intra and post-operative reliability of 3 measurements methods
- Lymphoedema of Sudeck’s syndrome
- Post-trauma LE: larynx or 2nd: prognosis
- Lymphatic and venous changes in post-trauma LE of the Lower limbs
- Unusual presentation of Lower limb LE
- Lymphatic drainage of the shoulder and anterior thoracic wall after post-therapeutic LE
- Lymphoscintigraphy and Laser Doppler in LE: prognostic values in the Prevention of Laryngeal and 2nd Kind
- Venous compression and Laser Doppler in LE
- CT and MRI values in assessment of lower limb LE
- LT and microcirculation study of 25 cases
- Skin microcirculation optimization in upper limb LE
- Antioxidant therapy by combination of less elastic and fibrinoid bandages
- Treatment of LE by magnetic field, vibration and
COMPUTERIZED TOMOGRAPHY IN LYMPHEDEMA: DIAGNOSTIC AND THERAPEUTICAL IMPLICATIONS

MICHELINI S., FAILLA A., MONETA G., PARONI STERBINI G.L., RUSSO F.
S. Giovanni Battista Hospital - Rome - Italy

We have studied 115 patients suffering from primary or secondary lymphedema of the limbs (77 unilateral and 38 bilateral).

All the subjects underwent C.T. scan with an examination of 5 axial cuts each limb: 1 at root level, 1 at the third middle of the intermediate segment of the limb (thigh or arm), 1 at the third proximal (leg or forearm) of the distal segment, 1 at the third distal of the distal segment and 1 in the intermediate zone of the last segment of the limb (feet or hand).

In case of "suspended lymphedema" the cut were addressed in the interested area only.

The data of the patients have been compared with 10 healthy subjects.

The following data were analyzed (in comparison in the two limbs): epidermal thickness, suprafascial thickness, subfascial thickness, muscular thickness, muscle thickness, rib thickness, presence of fluid in the tissue (negative values -0.30 of the signal), in water component (+ + + values of signal) or in fibro-tissue component (positive value of signal -60 +70).

We have observed: 28 patients with a prevalent suprafascial component (24.2% of patients - A); 69 with a prevalent water component (60% - B) and 18 patients with a prevalent fibro-elastic component (15.8% - C).

A local muscular hypertrophy or diffused in the affected limb respect to the contra-lateral or prevailing among two suffering limbs, were observed in 71 patients.

The exam, over then diagnostic confirm, allows to address a selective liposuction: in the B group must be performed physical, pharmacologic and microsurgical treatment: in the C group physical treatment with a greater utilization of elasto-compression and ultrasounds, is the better choice.

USEFULNESS OF PROTON MR SPECTROSCOPY IN LYMPHEDEMA

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(2) P.H.L. Studio College (Brussels, Belgium)
(3) St. Luc Medical Division (Brussels, Belgium)

Purpose: To determine the nature of intralobular US hyperechogenicity in chronic lymphedema with high resolution MR imaging and proton MR spectroscopy.

Material and methods: We performed bilateral ultrasound imaging with 13,5 MHz probe, high resolution TSE T1 and TSE T2 with and without Fat-Sat MR imaging and MR Single Voxel Spectroscopy (10x10x10 mm) in 10 patients with secondary chronic lymphedema of upper or lower extremity. We determined for each case Spectroscopy Water/Fat ratio in the pathologic extremity and the contralateral side. 3 patients underwent Chemical Shift Imaging Spectroscopy with 5x5x6 mm voxel size.

Results: All patients had intralobular hyperechogenicity and persistent intralobular fat signal in high resolution MR imaging. Water/Fat ratio of MR spectroscopy were significantly higher at cases of lymphedema (mean +/- SD: 0.49 +/- 0.34) than in contralateral extremities (mean +/- SD: 0.086 +/- 0.15) (P<0.0015). CSI spectroscopy suggest presence of intralobular water in case of hyperechogenic lobe.

Conclusion: Ultrasound and MR Spectroscopy are higher sensitive than conventional MR imaging to depict intralobular changes in lymphedema. MR spectroscopy suggests that intralobular US hyperechogenicity in lymphedema reflects increased intralobular water.
NORMAL HEAD AND NECK LYMPH NODES TOPOGRAPHY BASED ON THE DATASET OF THE VISIBLE HUMAN

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(2) Department of Medical Radiation Physics, Karolinska Institute, Stockholm, Sweden

Purpose: To present the number, location and size of the normal-sized lymph nodes of the head and neck region of the investigated “Visible Human” female and male dataset.

Methods and Materials: The data presented here were obtained by detailed investigation of the “Visible Human” female and male. The optical anatomic axial microtome slices of the head and neck region were recorded every 1 mm (interval). The resolution of the images investigated was 28 pixel per cm. Special attention was devoted to the topography as well as the number and size of lymph nodes.

Results: New data on the location of normal sized lymph nodes in anatomical optical microtome sections were acquired. “Visitable” nodes were identified, i.e., normal size head and neck lymph nodes with diameters of less than 3 mm diameter which remain “invisible” for imaging methods such as CT or MRI. The identified nodes were classified conform to the CT-based nodal classification of Sni et al. (1999) and the recently proposed consensus guidelines of Greigore et al. (2003).

Conclusion: New data on the normal sized head and neck lymph nodes based on the dataset of the Visible Human were acquired. A 3D representation of the head and neck lymph nodes was performed.

Neck lymphatics, nodal level, 3D representation, nodal classification, visible human dataset.

GROWING DISCREPANCY OF ANGIODYSPlastic LOWER LIMBS IN PEDIATRICS.
RADIOLoGICAL MEASUREMENT

C.M. PAPENDeCK, M.L. BARBOSA, P. POZO
GDF - ISSA - Buenos Aires - Argentina

The length and volume measurement of the angiodyplastic lower limbs in pediatrics, depends on different variables, sometimes, difficult to evaluate in a constant, objective way. It is important to consider the age, weight, growth, type of malformation, uni or bilateral compromise and non vascular syndromes.

The present study wants to demonstrate an objective and constant way of measurement, and even so, to evaluate this information in relation to the diagnosis, before and after the treatment. The purpose is a radiological measurement in an extract from X-Ray of corporal segments, every 6 months.

The measurement is performed among constant bony points, and the difference between both limbs, plus 50% of the discrepancy, gives us the fenth asymmetry. To determine the volume measurement, over the same X-Ray, mentioned before, we trace a perpendicular line in the middle point of the length, and exactly at that point we measure limb diameter, bony diameter, and subcutaneous thickness.

The 1° X-Ray is for diagnosis and to establish the discrepancy. In intervals of 6 months or its multiples, we repeat the images in similar conditions. 132 measurements in 70 patients, with an average age of 5 years (1 month - 20 years) was our data basis, in different syndromes: Primary Lymphedema, Adipose tissue tumors (like Lipoblastoma, Klippel Trenaunay, Weber and Servelle Syndrome, FP Weber S., Lymphangiomatosis, Hemangiomasosis, Phleboangiomatosi, other Hamartomas or Phacomatosis, and non vascular Hemiscoporal Hypertrophies, were included.

This non operator dependant, easy images, are an objective and sure way to evaluate the children for diagnosis and the response of the treatment or spontaneous evolution.
ROSUVASTATIN EFFECT ON LYMPHATIC PUMPING IN DIABETIC RATS. WHAT IS THE ROLE OF LYMPHATIC ENDOTHELIAL DYSFUNCTION?

F. COHEN-BOULAKIA, A. BEHAR, K. TAHRZAOUI, R. LESTRADE, JR. ALBERTINI, P. VALENSI

Diabetes-induced various micro vascular disorders including an increase in capillary permeability and an impairment of lymphatic function, with a specific impact on lymphatic pumping.

The aim of this study was to test the effect of rosuvastatin on microcirculatory function in diabetic rats. Forty-five male Wistar rats with streptozotocin-induced diabetes were randomized at the time of weighing into 3 groups: rosuvastatin (R), mevalonate and rosuvastatin (MR), and untreated group (U), and were conformed with a control group of 15 rats. At the age of 3 months (T0), R rats started rosuvastatin treatment (20 mg/kg/day) and MR rats a combined treatment by rosuvastatin and mevalonate (30 mg/kg/day for both). The capillary filtration of albumin (CFA) was investigated by an isotopic test with technetium-labelled albumin. Radioactivity was measured externally on a hindaquarter, before, during and after venous compression. Interstitial albumin retention (AR) was determined and lymphatic function was evaluated by the fast Fourier transform of the radioactivity disappearance curve (ratio of the amplitudes of the low and high frequency peaks). LF/HF. This ratio is correlated with colloid half life in lymphoscintigraphy. The test was performed at T0, T1 (age: 5 months) and T2 (8 months).

Results: At T0, AR was significantly higher in groups U, R and MR than in control rats (p < 0.001 for all). In group U, AR increased from 7.8% ± 2.1 at T0 to 13.6% ± 1.3 at T1 and 20.1% ± 1.7 at T2 (p < 0.001). In group R, AR decreased from 5.8% ± 1.6 to 2.0% ± 0.7 and 2.3% ± 1.1 (p = 0.01). In group MR, AR decreased from 5.5% ± 1.4 at T0 to 1.4% ± 0.6 at T2 (p = 0.001). LF/HF increased significantly in group U from T0 (0.55 ± 0.04) to T2 (0.70 ± 0.15) (p = 0.003). In groups R and MR, LF/HF did not change significantly from T0 to T2 and did not differ from control rats (0.13 ± 0.03 at T2). Inflammatory factors like: creatinin phosphokinase (CPK) and C reactive protein (CRP) was performed, and this 2 factors are significantly lower in group R versus group U.

In conclusion:

- Beyond the beneficial effect on blood micro circulation, Rosuvastatin prevent the impairment of lymphatic function in an independent way of its lipid lowering effects.
- Rosuvastatin inhibit leukocyte-endothelial cell interactions and protect against inflammatory process could be for all the micro vascular endothelium.
- Rosuvastatin is effective against oxidative stress with correction of defective NO in diabetic rats.

LYMPHATIC DISPLAYSAS OF THE NEWBORN: ROLE OF LYMPH-SCINTIGRAPHY

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* Department of Pediatrics (DSPG), Service of Neonatal Pathology; G. Gelfand Institute
** Department of Surgery (OICN), Section of Lymphatic Surgery and Microsurgery, S. Martino Hospital
*** Department of Medicine (USML), Service of Nuclear Medicine, S. Martino Hospital, University of Genoa, Italy

On the basis of the collaboration of Neonatal Intensive Care Unit of the University of Genoa, Gasini Institute, with the Nuclear Medicine Service of the San Martino Hospital of Genoa, and with the Section of Lymphatic Surgery and Microsurgery of the University of Genoa (period from January 1998 to December 2002), newborns affected by primary lymphedema of various etiology who presented at birth at least one sign among the following, were investigated: hydraxes fetalis, hydrothorax, hydropericardism, ascites, lymphedema of the limbs, lymphedema of genitalia.

Chylothorax, chylopericardium, and chyrous ascites, as well as generalized lymphatic dysplasia may occur as separated or associated entities. More generally, all causes that may generate non-immune fetal hydrops, may also be the cause of lymphedema of the newborn or cavity effusions evidenced at birth. Diagnosis and management of a newborn affected by primary lymphedema is a challenge and early diagnosis during the neonatal age is very important to prevent the rapid evolution of lymphedema. Lymphoscintigraphy offers objective evidence of lymphatic pathway function from non lymphatic causes of lymphedema.
LYMPHEDEMA FOLLOWING THE SURGICAL TREATMENT OF BREAST CANCER: EVALUATION OF PROPHYLACTIC MEASUREMENTS
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Purpose: Lymphedema is a common complication of axillary dissection, affecting approximately 25% of patients. As lack of awareness of the problem, and of resources to deal with it, remains a major limiting factor in management, emphasis should be placed on prevention.

Methods: Fifty-five women, who had breast-conservation surgery with axillary dissection, were randomly assigned to either the preventive protocol (PG) or control group (CG) and assessments were made preoperatively, at 1, 3, 6, 12 and 24 months postoperatively. Arm volume (VOL) was used as measurement for the detection of arm lymphedema. The preventive protocol for the PG women included preoperative upper limb lymphoscintigraphy (LS), principles for lymphedema risk minimisation and early management of this condition when it was identified.

Results: Assessments at 2 years postoperatively were completed for 89% of the 55 women who were randomly assigned to either PG or CG. Of the 49 women with unilateral breast cancer surgery who were measured at 24 mo., 14 (22%) were identified with secondary lymphedema using the VOL; the PG women had an incidence of 8% and the CG women had an incidence of 36%.

Conclusions: These prophylactic strategies appear to reduce the development of secondary lymphedema and alter its progression in comparison to the CG women.

HISTOCHEMICAL DEMONSTRATION OF REGENERATING LYMPHATIC VESSELS IN THE WOUND HEALING
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Purpose: Wound healing skins of the mouse have been investigated to address the 5'-nucleotidase (5'-Nase) and VEGF-3 histochemical techniques to unravel the morphological variation of regenerating lymphatic vessels and to address the question regarding to contribution of lymphatic proliferation to tissue repair processes.

Methods: 5'-Nase and ALPase activity for demonstrating lymphatics and blood vessels, respectively, in the regenerating tissues was examined by light and electron microscopy. For immunohistochemistry, the specific lymphatic endothelial markers, VEGF-C and its receptor VEGFR-3 in addition to von Willebrand factor for blood vessels were examined. The antigen site of VEGFR-3 was also examined in ultrathin sections by a postembedding immunogold technique.

Results: In the wound healing processes, the present study showed that the regenerating signal of VEGF-3, the receptor of VEGF-C, on the lymphatic endothelial cells appeared as early as three days after injury in the subcutaneous tissue, much earlier than in the dermis. Many accumulated vasculatures that have 5'-Nase and PECAM-1 reactivity are located in the wound edge. In the subcutaneous tissues of a 7-day wound, 5'-Nase activity is obviously represented on a large collecting lymphatic vessels that are positive for ALPase staining. In contrast to intense PECAM-1 staining for the blood vessels, the immunoreactivity on the lymphatic vessel is extremely weak.

Conclusion: The present findings indicate that VEGF-C-induced lymph-angiogenesis occurs from the subcutaneous tissue to dermis along the wound healing edge, especially in the dermal-subcutaneous transitional area, favorable for sprouting and growth of regenerating lymphatic vessels.
LYMPHATIC MICROSURGERY: FROM DIAGNOSIS TO TREATMENT
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Purpose: We analyzed clinicopathologic and imaging features of chronic peripheral lymphedemas to identify imaging findings indicative of the exact etiopathogenesis of lymphedema and to establish the optimal treatment strategy.

Methods: In the last 25 years, over 1000 patients with peripheral lymphedema have been treated with microsurgical lymphatic-venous anastomoses. Of these, 66% were available for long-term follow-up study. Objective assessment was undertaken by water volumetry and lymphoscintigraphy.

Results: Objectively, volume changes showed a significant improvement in 83% of patients, with an average reduction of 67% of the excess volume. Of those patients followed-up, 85% have been able to discontinue the use of conservative measures, with an average follow-up of more than 7 years and average reduction in excess volume of 69%. There was an 87% reduction in the incidence of cellulitis after microsurgery.

Conclusions: Microsurgical operations have a place in the treatment of peripheral lymphedema and should be the therapy of choice in patients who are not sufficiently responsive to nonsurgical treatment. Improved results can be expected with operations performed earlier at the very first stages of lymphedema.

AN EARLY (LATENT) STAGE OF SECONDARY ARM LYMPHEDEMA AND ITS SUCCESSFUL TREATMENT WITH EXOGENOUS PROTEINASES
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Introduction: An early diagnosis and therapy of lymphatic drainage impairment (latent stage) developing after axilla dissection and/or radiotherapy play a key role in further progression of pathologic changes both in the lymphatic bed and soft tissues which are being drained by this bed. Insufficiency of valves and development of lymphatic plugs in lymphatic vessels accompanied with lymph retention in surrounding soft tissues lead to the edema and fibrotization.

Methods: Since clinical examination reveals no marked pathology on the arm, the patients are usually treated based on wrong diagnosis. Shoulder joint rehabilitation and non-steroidal antiphlogistics are usually prescribed. Main symptomatology of the latent stage: nonspecific pain, feel of tension, pressure or heaviness in the appropriate region, more significant fatigue in comparison to the other side, recurring cysticles. Therefore, lymphoscintigraphy plays a key role in diagnosing. In the therapy, as a first choice method we used orally administrated proteinases (trypsin, chymotrypsin, papain, bromelain, complemented with rutisol).

Results: In our group of 400 women suffering from various stages of lymphedema we diagnosed latent stage in 15% of patients. After 3 weeks of monotherapy with proteinase mixture, complete recession of subjective complaints was achieved in 90% of patients. After 6 months of treatment, control lymphoscintigraphy showed a complete or nearly complete normalization of lymphatic system function was found in 60% of patients.

Conclusions: Proteinases are able to interrupt a vicious spiral and to normalize a lymphatic circulation in the affected region. They are able to markedly improve a trophicity of already indurated and sclerotized tissue, thus showing an obvious subjective effect for patient.
FIVE YEARS FOLLOW UP IN PRIMARY AND SECONDARY LYMHPHEDEMA: OUR EXPERIENCE

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225 patients with primary lymphedema (96) or secondary (129) at III clinic stage were studied after 5 years by the first observation. 64 had been treated with intensive cycle of combined treatment in hospitalization conditions and 151 with ambulatory cycles.

79 (A group) had been made six-monthly clinic checks, 84 (B group) annuals, 41 (C group) inconstant and 31 (D group) didn't have made any check.

72 patients of A group had made an annual therapeutic cycle at least and 59 of them had made constant therapy in domiciliary conditions. 76 patients of B group had made one annual combined treatment. 20 of C group had practiced from one to two cycles in five years and only 5 pts had practiced a new cycle in five years.

In the follow up we have observed:
- A group: substantial maintenance of improvement obtained after the first cycle in 71 patients (89.8%); 8 lymphangitis episodes (5 recurrences); 7 clinic worsening (8.8%);
- B group: substantial maintenance of improvement obtained in 70 patients (83.3%); 7 lymphangitis episodes (4 recurrences); 2 improvements and 12 clinics worsening (14.2%);
- C group: substantial maintenance of improvement obtained in 12 patients (29.2%); 29 clinics worsening; 6 lymphangitis episodes (3 recurrences);
- D group: substantial maintenance of improvement obtained in 3 patients (14.2%); 18 worsening (85.7%); 9 lymphangitis episodes (4 relapses).

Substantial differences results between primary and secondary lymphedema cases were not observed. Substantial differences were not observed in the 5 cases of primary and secondary lymphedema. The study shows the importance of a constant monitoring of the patient suffering from lymphedema and of the need to carry out new therapeutic periodic cycles with domiciliary therapies in support. In this chronic pathology the results in the passing, in the same clinical cases, are caused by personality, cultural conditions, social and economic conditions of the subjects, by proximity of patients residence to the specialized centres for the treatments and, above all, by organizer and supplier capability of private or public health service.

ITALIAN SOCIETY OF LYMPHANGIOLOGY GUIDELINES LOOKING TOWARDS EUROPE AND THE WORLD

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The Guidelines of the Italian Society of Lymphangiology are a practical translation of the Consensus Document of the ILS, only wrapped up in a customized packaging to meet specific social-health needs of our Country. This contribution, which is open to interdisciplinary and inter-societal collaboration, is to be considered as a living document. It will be periodically updated and adjusted to all new information expected to be produced by Evidence-Based and Problem-Oriented Medicine, through the analysis of the International Scientific Literature, which is indeed the necessary foundation of these Guidelines.
IATROGENIC SURGICAL LESIONS OF LYMPHATIC STRUCTURES OF THE LOWER LIMBS

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The surgical approaches of various structures in the lower limbs, - chiefly for arterial or orthopedic reconstructions --, through classically positioned incisions can lead to iatrogenic affronts of lymphatic collectors and nodes. These affronts usually generate, early than, transitory, or permanent, distal swelling. Such edema might be present in 27 to 70% of the legs after arterial reconstructions below the inguinal ligament. In a personal series, such situation was formerly observed: in 59% of the cases after "above-knee" (A.K.) procedures and in 80% of the subjects following A-K, plus "below-knee" (B.K.) restorations. According to the literature, more or less persistent B.K. swelling appears in 26 to 80% of the patients following prosthetic knee replacement due to lymphatic or veno-lymphatic impairments.

Six months after A.K. + B.K. arterial reconstructions, 16% of the patients still demonstrated edema. These postoperative distal swellings may result from the disruption of flow-pressure balances in the microcirculation, preexisting lymphoscrosis, or the lack of "muscular - venous pumping". However, they are chiefly due to peripherally obstructed lymph pathways. Modifications in the approaches to the arteries lowered the early incidence to 11% in A.K. procedures, and to 20% following A.K. + B.K. operations. Only 6% among the limbs having undergone AK + BK procedures still present some edema 8 months later while 0% of the A.K. isolated procedures had such sequelae.

• Some basic anatomical considerations also concern the explantations of segments of the "great saphenous vein" for peripheral or aortocoronary arterial bypasses, or its preparation for "in situ" arterial femorodistal bridging, extensive varicectomies, or various orthopedic operations....

• A lymph leakage from lymphatic fistula due to a skin incision can lead to considerable loss of fluids and proteins. The continuous flowing of lymph on a granulating recent wound may widely delay its healing. It has sometimes to be treated by excising the altered segments and "en bloc" suturing the defect, because self-healing often needs very long-term local cares.

INJURIES BY PERCUTANEOUS HIGH PRESSURE INJECTION

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Commonly used implements (hydraulic pumps, spray-guns, industrial tools,...) induce high pressures up to 800 Kgr per sq. cm or more in various - sometimes overheated - fluids: air, gases, water or numerous solutions / saturated hydrocarbons of diverse consistencies (paraffins, tar, lubricating oils and greases, waxes,...) / oils, fats, paints, detergents, silicones, pharmacodynamic agents,...)

When such elements are flung through a small-sized jet, they may behave like high velocity solid projectiles, then able to perforate the skin and spread in the deeper tissues, according to the firmness of the smitten layers ("mechanical damage"). The "physico-chemical constitution" of the injected substance(s) induces the general and/or local body reactions: they may appear as a non-symptomatic scarring tissue or generate inflammatory response, tissue necrosis leading to amputation, and even extensive intoxication... Late malignant degeneration is questionable (fibrosarcoma, angiosarcoma,...). The "subcutaneous implantation" of hydrocarbons and silicones in plastic surgery has been already widely appraised. Injections of "other stuffs" chiefly concern "accidents at work". The treatment must consider the "mechanical lesion", the "chemical alterations" and a casual "bacterial contamination".

The literature about these fairly rare but serious injuries is reviewed. A case of high pressure injection lesion of low viscosity mineral oil in a hand is reported: severe lymphoscrosis and lymphedema developed over 7 years in the whole left upper limb with migration of microscopic droplets of oil, far away from the hand scattering site, up to the axilla and possibly into the mediastinum. Medical-legal aspects and therapeutic possibilities are considered.
MODIFIED COMBINED DECONGESTIVE PHYSIOTHERAPY IN HEAD AND NECK LYMPHEDEMA MANAGEMENT

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Lymphedema of the face and neck is frequent complication after radical oncological treatment of ORL malignancies (surgery, radiotherapy etc.). There are several problems in applying standard complex decongestive physiotherapy (CDP) in these cases because of the topography of the lymphatic drainage of the region in question. Therefore, the authors tried to modify the procedures of CDP suitable for early postoperative treatment of the head and neck lymphedema. There have been 9 pts (6 men and 3 women), aged 43 to 61 years (mean 53 years) treated since 11/03 (mean follow up 5 months). All of them underwent radiotherapy. From CDP procedures the manual lymphdrainage, compression masks, special supportive exercises and arrangements in pts' daily regime were applied in targeted individual modifications and sequences. Appropriate data and documentation are presented. Results: in 5 of the patients excellent, in 4 pts. moderate improvement of the lymphedema was achieved. In 2 pts. local complications were noted which worsened the clinical state temporarily. The authors consider the modified CDP being an efficient tool in the head and neck lymphedema after radical treatment of ORL malignancies management.

NEGATIVE PRESSURE, LYMPHATICS AND BLOOD VESSELS

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Introduction: Treatment of lymphedema is difficult. There are not specific medicaments for therapy of lymphedema. In contemporary period for the treatment of lymphedema are recommended machines that produce intermittent negative pressure or alternation of negative with positive pressure. In available literature are scanty information about the role of lymphatic vessels in vacuum conditions. The goal of our study is to describe morphology behavior of lymphatics and blood vessels in subatmospheric pressure.

Material and methods: Studies were performed on the three groups of the dogs. In the first group of the experiments the lower leg of the dog was placed in to the box from which the air was sucked by vacuum pumps. In the second group of experiments the whole dog was placed in to the box. The animals were intubated by endotracheal cannula and the top of the cannula was fixed outside the box. With this way the dogs breathed the atmospheric air. In the third group of experiments only lower part of the body with the legs were placed into the box. In all cases of experiments the air from the boxes was sucked by vacuum pumps. Cardiac action, blood pressure and partial tissue oxygen were monitored through the all period of experiment. The negative pressures in the levels of 10 mmHg, 20-25 mmHg, 30-35 mmHg and 45-55 mmHg were maintained for period 1, 2 and 4 hours. After finishing of experiments the samples of dermis and subcutaneous tissue from the thigh, shin, abdominal and thoracic wall were excised and processed by histological and electronmicroscopical methods.

Results: In all samples of subcutaneous tissue and dermis the edema was present. The ultrastructure of skin lymphatics which were influenced with low negative pressure (negative pressure 10 mmHg) for period 1 hour was a little changed. In some cases no morphology changes were found in other ones discrete changes in the sense of increasing pinocytosis and light opening of interendothelial channels of lymphatics were visible. Under the circumstances of higher negative pressure (negative pressure 30-50 mmHg) for period 1 and 2 hours the subendothelial lymphedema, vacuolation of endothelial cells, folding of the lymphatic wall, desquamation of single endothelial cells and large gaps between endothelial cells with protrusion of interstitial tissue to the lumen of lymphatics were found. The similar changes in blood capillaries were found but in the same extent as in lymphatics.
FACIAL LYMPHAEDAMA
IN MELKERSON-ROSENTHAL
SYNDROME

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The Melkerson-Rosenthal syndrome is a rare disorder described in 1928 and in 1931, characterized by the triad: recurrent facial edema, facial nerve paralysis and lingua plicata. The complete triad is very rare, and monosymptomatic variants are more common, that’s why the diagnosis may be difficult. It is an uncommon cause for facial lymphedema.

Case Report: We present the case of a woman diagnosed of Melkerson-Rosenthal syndrome that has developed a facial lymphedema. A 25-year-old woman with a right-sided lymphedema of the face and upper lip came to the Lymphedema Unit. Her medical history presented a recurrent angioedema of the face and lip that started at six years, with multiple outbreaks that were irregular and often related with herpes simplex virus. She also presented with the facial swelling an erythematous eruption that was painless and non-pruritic accompanied with nonpitting edema.

In the last times, the attacks have become more and more frequent, and now she is having one recurrence per month that stays for 7 to 10 days. In the dermatology service, the magnetic resonance showed a non inflammatory, non inchaemic, non quaiiformative process. Only the edema in the right cheek with a trabeculated fat tissue and cephalic adenopathies were identified. All the allergy tests results were negative. The biopsy of the lip showed a non necrotizing granuloma and perivascular linfocytic infiltration. She was treated with metronidazol, etanercept and corticosteroids with lack of response. Physical therapies for lymphedema will try to reduce the swelling and fibrosis.

EDEMA OF THE HANDS
IN INTRAVENOUS COCAINE
ADDICT PATIENTS

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Purpose: The repeated intravenous (i.v) injections of cocaine can provoke in addict patients venolymphatic decompensation.

Patients: We report the case of 3 patients, one man (36 years) and 2 women (28 and 32 years), ex-i.v-cocaine addict from: 5, 6 and 5 years, all substituted by buprenorphine. The 5 patients presented painful oedema of hands, who appeared 16 months, 2 years and 3 years after stopping i.v injections. Artery echodoppler was normal. 2 patients presented sequella of superficial venous thrombosis of the back of the hand. In 2 patients the lymphoscintigraphy of upper limbs showed lymphatic insufficiency. The third refused lymphoscintigraphy. Cardiac, hepatic and renal examination are normal.

Conclusion: Few years later, ex-i.v cocaine addict patients can present oedema of hands. This oedema could correspond to a venolymphatic insufficiency, consecutive to numerous i.v injections, followed by venous thrombosis and infections.
A QUALITATIVE INVESTIGATION
OF THE LIVED EXPERIENCE
OF LYMPHOEDEMA

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Purposes:
1. To elucidate the nature of patients’ experiences of living with lymphoedema.
2. To inform other work on developing a condition-specific quality of life measure for lymphoedema, by identifying areas of experience which are important for patients and can be included in the quality of life tool.

Methods: This was a phenomenological study using data from semi-structured taped interviews of 22 patients, who were already being treated for lymphoedema in our clinic. The data were subsequently transcribed and analysed using a method of thematic content analysis, adopted from the grounded theory approach.

Results: The main themes which emerged were feelings of loss, both actual and potential, relating to the individual’s role, work, body image, self esteem and embarrassment.

Conclusions: The themes identified concur with those reported in existing literature and support the domains addressed in our quality of life measure.

THE DEVELOPMENT
OF A CONDITION-SPECIFIC QUALITY
OF LIFE MEASURE FOR LYMPHOEDEMA
(LYMQOL)

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Purpose: To develop and validate a condition-specific quality of life measure for lymphoedema (LYMQOL).

Methods: A condition-specific quality of life measure for lymphoedema was developed by the multidisciplinary team in our lymphoedema clinic. The tool covers the following domains, symptoms, body image issues, function and mood. The structure of the questionnaire is similar to that of the EORTC QLC-C30 tool used for clinical trials in cancer and, indeed, the mood section is taken from the EORTC tool with permission. Separate tools have been developed for arm and leg lymphoedema. Initial stages of the validation included a comparison of the “score” using LYMQOL with that of the EORTC QLQ-C30 as a “gold standard”.

Results: The tool and the results of this early stage of validation will be presented.

Conclusions: We hope that this tool will provide a way of measuring the impact of lymphoedema on the quality of life of sufferers and also demonstrate improvement following treatment.
EVALUATION OF NORMAL MESORECTAL LYMPH NODES BASED ON THE DATASET OF THE VISIBLE HUMAN

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Background and Purpose: Despite the frequent application of the total mesorectal excision, very few data regarding the location, number and distribution of lymph nodes within and around the rectal mesentery exist. The scope of this study was to describe the number, size and anatomical topography of mesorectal lymph nodes in the so-called “visible human” male dataset.

Materials and Methods: The dataset from the visible human male was studied. The male whose body was used as visible human was 38 years old at the time of death. The cadaver was perfused with 1% formalin and anticoeagulant. Optical anatomic mycrotoite produced slices at 1 mm interval and with a resolution of 2.8 pixels per mm were carefully examined. The region between the common iliac bifurcation and the anal sphincter was investigated.

Results: A total of 27 mesorectal lymph nodes were identified. The majority (17 of 27) of the lymph nodes were above the peritoneal reflection and 10 of 27 (37%) below it. The majority of the nodes were located in the left lateral and posterior rectal mesentery. The majority of the lymph nodes were 3 mm or less in diameter. Twenty lymph nodes were 1 mm or 2 mm in size, 5 nodes were 3 mm, and only 2 were 4 mm. The lowest situated lymph node was 2.8 cm from the anal sphincter. A total of 21 lymph nodes in the presacral and laterosacral space were identified.

Conclusion: These data are of importance for the definition of quality of the pathological examination of the mesorectal nodes.

Key words: rectum, mesorectum, lymph nodes, visible human, IMRT.

TOPOGRAPHY OF THE LYMPHATICS OF THE BREAST BASED ON THE VISIBLE HUMAN DATASET

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Background and Purpose: The appropriate application of 3-D CRT and IMRT for breast cancer patients requires a standardization of the procedures for the delineation of target volumes. The scope of the paper is to present the data acquired by studying the nodal location and topographical distribution in axial slices in the Visible Human (VH) datasets that makes standardization possible.

Materials and Methods: The location, number and size of regional lymph nodes of the breast were studied by careful investigation of the axial anatomic optical microtome slices of the VH dataset. The lymphatics considered as loco-regional for the breast includes the axillary, the internal mammary chain and the supraclavicular nodes which were identified by the investigation of the VH female and male datasets. Visualized were more than 70 lymph nodes as small as 1-20 mm.

Results: The axillary nodes identified were classified conform to the Berg level classification. Thirty-eight left located (22 level I and 13 level II) and thirty-five right located (22 level I and 13 level II) axillary lymph nodes in the visible human male were identified. The Roter lymph node on the right side was identified. Axillary lymph nodes located lower than the apex of the scapula on each side were identified. In the visible human female dataset except the axillary lymph nodes, supraclavicular and internal mammary nodes, in breast located lymph nodes were identified.

Conclusions: The topographical distribution of a large number of normal sized lymph nodes of the regional lymphatics of the breast of the VH male and female dataset was identified. A 3D representation of the loco-regional lymphatics of the breast was performed.

Key words: breast cancer, regional lymph nodes, nodal classification, visible human, target volume.
LYMPHOSCINTIGRAPHY AND LYMPHEDEMA: FROM PREVENTION TO PROGNOSIS

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Already for any years, the guidelines of the I.S.L. describes the lymphoscintigraphy as the "diagnostic gold standard" in the study of lymphedemas. After the subcutaneous injection of the tracer in the interdigital spaces of the hands and the feet, must be stimulated the muscular pumps of the limbs for 15 minutes and subsequently must be performed a revelation with a gamma camera of the distribution and of the times of appearance of lymphnodes after 30’ – 60’ – 90’.

We have examined 423 subjects: 40 of a control group, 121 suffering from unilateral or bilateral primary lymphedema of the limbs, 205 with a secondary lymphedema of the limbs and 57 with a primary or secondary subclinical lymphedema. The exam pointed out:

- in clear clinical cases, presence and distribution of "dermal back flow" along the whole limb in the controls after treatment it was reduced in 79.5% and in 20.5% (disappeared);
- absence of "dermal back flow" in healthy subjects or in subclinical lymphedemas, (blood related of patients suffering from primary lymphedemas on patients subjected to a lymphoedactomy at the root of the limb but with remaining limbs);
- presence of lymphodermal steps along the limb in 83.4% of cases of clear lymphedema and in 52.4% of subclinical cases (often are bilateral to testify a constitutional predisposition). Absent in healthy subjects;
- Presence of lymphatic alternative pathways (sotvagtic, super trocaral) in 77.8% of cases, also in 57.9% of healthy subjects;
- reduced or been missing visualization of lymphnodes at he root of the limb in 94.7% clear clinical cases. Normal visualization in healthy subjects;
- reduced visualization in 29.2% of subclinical primary cases (21.4% unilateral, 7.8% bilateral).

In patients with a profound lymphedema (57 cases), in 25.2% of cases a reduced presence of lymphnodes at the root of the limb with a presence of "dermal back flow" corresponding to the suffering anatomic area, was observed. In these cases the prognosis is less favorable in order to a complete recovery. Among 41 cases of post-surgery lymphedemas for auto-coronary by pass, 26 (57%) showed a reduced presence of lymphnodes of the groin of the operated limb, in the contralateral groin all was normal. In these cases, a pre-surgical investigation through lymphoscintigraphy could be avoid iatrogenic forms of lymphedemas.

In conclusion, the authors underline the importance of lymphoscintigraphic exam in the study of lymphedema of the limbs to point out:

- diagnostic definition;
- therapeutic address;
- prognostic definition.

COMBINED PHYSICAL TREATMENT IN PATIENTS WITH LYMPHEDEMA: WHICH AND HOW?

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The clinical experience acquired on 2.500 patients along 15 years of vascular rehabilitation activity, shows that physical combined treatment in lymphedemas provokes different clinical reactions in each case in relation with the clinical stage, the fisiostatic suprafascial component, the alternative pathways in each patient but, above all, in relation with the times of application and the misalignments of execution of therapeutic techniques.

Manual lymphatic drainage, considering the common "terminus" of lymphatic pathways coming from lower limbs and the different "terminus" of lymphatic pathways coming from upper limbs, must be performed bilaterally in lower limbs (also in unilateral lymphedema) and unilaterally in upper limbs. In patients underwent a double mastectomy with a double large arm, even then the treatment of the arms, must be also stimulated back and lateral alternative pathways.

In the lower limbs bilateral lymphedemas (especially in presence of absence or damage of biarticular lymphnodes) through the latical and back alternative pathways, lymph must teach armpit and supraclavicle lymphnodes.

Sequential pressure therapy, best in primary lymphedemas, must be bilaterally executed in lower limbs, unilaterally in upper limbs.

In all cases must be taken into consideration all the local contraindications (inflammations) and the systemic contraindications (cardiac lack of balance, arterial hypertension).

Elástic compression represent the main tool of treatment, especially in those patients where can be performed an adiopate muscular work during the day. It will be multilayer in multilayer of subjects and bislatic in monolayer in less valid or bed rest patients.

Footsy, gymnastic, best if executed with elastocompression on, wants to activate the main groups of muscles of the limbs in order, also, to restore muscular trophism when there is a lack of Stile of it.

In case of consequences of radiation therapy, with neurological peripheral damage, we met muscular atrophy and lymphopathy deficit and also in this case isometric gymnastics is useful.

Ultrasound therapy (9W cm2 of intensity) is employed in presence of sclerosis of derma or fibrosis (usually in flexion sides) due to a greater protein intracelulare concentration. Times of treatment goes from 5 to 30 minutes a day.

Respiratory gymnastics complete the treatment promoting the return of lymphatic fluids through an indirect mechanism of pressure gradient between the limbs and the abdominal and mediastinal areas, all with the paracinesis of diaphragm movements.

In conclusion, physical combined treatment is framed in a complete project that develops around the single patient and request personalized techniques and times of application for each clinical case.
LYMPHANGIOGENESIS AND HEMANGIOGENESIS IN LESIONS OF MYOCARDIAL INFARTION

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Purpose: Observation of lymphangiogenesis and hemangiogenesis in lesions of myocardial infarction.

Methods: Six autopsy cases of myocardial infarction were used in this study. The paraffin sections of the myocardium were subjected to immunohistochemistry using anti-LYVE-1 antibody to identify lymphatic vessels and anti-von Willebrand factor antibody to observe blood vessels.

Results:
1. Main lesions of myocardial infarction: In the lesions of acute myocardial infarction composed of coagulation necrosis, no lymphatic vessels were observed by anti-LYVE-1 immunohistochemistry, however, dilated lymphatic vessels were present around the infarction lesions. By anti-von Willebrand factor immunohistochemistry, reaction with blood vessels became blurred probably due to ischemic necrosis. In the lesions of subacute phase composed of granulation tissue, regenerating blood vessels were observed by anti-von Willebrand factor immunohistochemistry. No lymphatic vessels were observed in the subacute lesions. In the periphery of the chronic lesions composed of scarred fibrosis, both dilated lymphatic vessels and dilated blood vessels were present.

2. Focal small necrotic lesions around main lesions: In the acute focal small necrotic lesions, no lymphatic vessels were observed by anti-LYVE-1 immunohistochemistry. Normal blood vascular distribution was preserved to the focal small lesions when observed by anti-von Willebrand factor immunohistochemistry. Lymphangiogenesis was observed in subacute focal small lesions when observed by anti-LYVE-1 immunohistochemistry.

Conclusion: In the main lesions of myocardial infarction, lymphangiogenesis observed in later period compared to hemangiogenesis. In the focal small necrotic lesions, lymphangiogenesis observed in rather early period, and no hemangiogenesis was observed.

PHLEBEDEMA VS. LYMPH EDEMA: MATERIAL, METHOD (PART I)

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Introduction: Defense constitutes the principal function of the lymphatic system. The circulatory function is secondary and it includes two parts: compulsory (macromolecular) and optional (water and electrolytes).

Material. Method: We have included in this study 3 groups of patients: I-acute deep thrombophlebitis (TFA), II-post-thrombosis syndrome (SPT), stages V and VI (CEAP), III-lymph edema of lower limbs stages IV and V (LE), three etiopathogenic forms of LE at which at the admittance has been applied a compressive bandages: a) primary LF (LFP), b) secondary LF (LFS) postradiosurgical and c) LF poterystip (LFE); TAP, 19 cases, SPT-9, LF-32 (LFP-11, LFS-17, LFE-4), totally 58 patients (18 W and 40 M). There has been measured the quantity of subcutaneous liquid obtained in the time unit (3 hours in the first day after admittance-after a rest in laying down position of 20 h), there has been measured quantitatively the proteins in this liquid (of edema) and in the serum and there has been accomplished CT explorations (axial sections for the foot, through the metatarsian and the lower 1/3 of the shank) and IRM (axial and sagittal sections for the foot and lower 1/3 of the shank and the thigh) and lymphoscintigraphy.
LYMPH EDEMA VS. PHLEBEDEMA – RESULTS (PART II)

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Results: At the patients from the lot I-TPA-the average quantity of edema liquid (CMLE)-79ml, total proteins 0.61g/dl, lot II- SPT- CMLE-42ml, proteins 0.64g/dl, lot III- LF- CMLE-14ml, proteins 1.3g/dl. The clinical diagnosis has been confirmed by lymphoscintigraphy: the speed of the lymphatic drain at the patients with TPA and SPT has been > than on undignified side (counter side), at the lot with LF has been < than on the counter side (in the case of LF on one side). IRM and CT emphasized at the patients from lot I-TPA-jiger-like spaces (areas) occupied by the hypo-oncotic edema liquid, among the areas with adipose tissue. At the patients from the lot II-SPT- the aspect of hypotrophic dermofibrolipo sclerosis and at the LF-lot III- hypotrophic dermo-hypodermic fibro sclerosis disposed as thick lines, nonsystematic that surround massive accumulations (important) of adipose tissue.

THE COMPULSORY VASCULAR LYMPHATIC LOAD VS. THE OPTIONAL LOAD-DEBATE, CONCLUSIONS (PART II)

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Debate. Conclusions: The normal interstitial liquid is normo-oncotic. The edema liquid causes alterations/ modifications in the extra cellular matrix from the cause (venous vs. lymphatic) to the effect (hypovascular). The edema from the acute or chronic venous failure is hypo-oncotic and abundant, the edema from the SPT (stages V and VI) is reducible in the lower rest (48-72h). The lymphatic structures maintain themselves in the presence of a high vascular dynamic, in hyper function (to these patients with SPT), in standing up position as in laying down position (the quantity of interstitial liquid in this case was higher with 58% in standing up position as in laying down position and the quantity of proteins was lower with 27% in the liquid obtained in standing up position). The lymphatic edema (the free interstitial liquid) is hyper-oncotic, reduced quantitative and no reducible in laying down position. The hyper-oncotic characteristics develop the accumulation of adipose structures and the process of the hypotrophic dermo-hypodermic fibro sclerosis. The phlebolymph edema, in this context, is a subjective (emotional) synergy.
**P17**

**TRANSCUTANEOUS OXYGEN PARTIAL PRESSURE IN UNILATERAL LYMPHEDEMA**

Y. TAMAL, A. TOUDOU, A. IMADA AND M. OHKUMA

**Purpose:** PO2 of proximal lymph is one fifth of that of venous blood. It is suspected that tissue PO2 of lymphedema is also low.

**Material and Method:** Six cases of unilateral lymphedema. 5 cases of nephrotic edema and 3 volunteers were evaluated for transdermal oxygen partial pressure at 4 points of the lower extremities. Blood flow was also checked in the leg of the same patient.

**Result:** PO2 of the lymphedematous extremity is also lower (more than 10%) than that of uninvolved extremity in the 6 unilateral lymphedema. The student t-test shows also the same result with a significant difference at all examined 4 points. Some nephrotic edema reveals also low PO2. And the volunteers show normal PO2. There was no difference in Laser-Doppler blood flow between the lymphedematous and the uninvolved extremity.

**Discussion:** Reishusser et al reported PO2 of the lymphedematous extremity is sometimes low and some of them become normal after MLD. But they are different after the age (The European J of Lymphology 12, No. 40:13-17(2004). In this examinations all data are obtained in the same patients and in e are not influenced by the age. This result may be used for diagnosis and differential diagnosis of lymphedema. The epidermal and dermal pathological changes in the lymphedema may be associated with this low PO2.

**Conclusion:** Six cases of unilateral lymphedema show low PO2 in the involved extremity.

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**P18**

**A 30 OR 90 MMHG - MANUAL OR PNEUMATIC - DRAINAGE IN PRIMARY LIMB LYMPHEDEMA: A COMPARATIVE PLETHYSMOGRAPHIC STUDY**

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**Purpose:** Volumetric effect of a 30 or a 90 mmHg external pressure has been evaluated in primary lower limb lymphoedema (PLL).

**Methods:** Starting at the root of the limb, a retrograde drainage is carried out manually with a light manual lymph drainage (MLD) and pneumatically with a 7 chamber boot of a programmable sequential pump (QIM 914.2). The pneumatic retrograde drainage (PRD) (program 50) was used twice: once with 30 mmHg, once with 90 mmHg. The 16 min session of those 3 procedures were spaced in time by 15 min rest. The order of execution offered 6 possibilities and was permuted after each case. Relative volume changes (% ofV) of the calf were recorded continuously (108 min) with a 6 Hg plethysmograph (SeliMed PL2) gauge fitted 10 cm below the knee. At present, 8 consecutive weant (34-year old) with massive (40 cm of calf circumference) and old (18 years) PLLL (at birth: 2; preadolescent; 5; tardy: 1) completed the study.

**Results:** Whatever the pressure or technique, all PLL experienced a progressive calf decongestion. Volumetric calf decrease reaches 0.07%V/min manually, 0.06%V/min by means of a 30 mmHg PRD and 0.15%V/min by means of a 90 mmHg PRD. With 30 mmHg, there was no difference between manual and pneumatic techniques. With 90 mmHg, decrease is noticeably higher (p < 0.001). After stopping management, improvement mainly persisted with respectively a slow reappearance of 0.01-0.02%V/min; 0.01%V/min; 0.05%V/min.

**Conclusions:** Promoting greater decongestion, a 90mmHg pressure may offer additional benefit for women with old PLLL.
THE DUKE HEALTH PROFILE:  
A SCALE TO MEASURE THE QUALITY 
OF LIFE  
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The treatment of patients who suffer from lymphedema consists of physiotherapy and/or in some selected cases, surgery. Many signs permit to appreciate the beneficial effects of these two kinds of therapy. The most important of them is the reduction of limb volume evidenced by a decrease in linear dimensions which can be observed by the physician and the patient himself. Nevertheless it would be of great interest to rigorously classify the opinion of the patient: to that effect, his opinion could be written on a well established form which must be identical for every body. The example of the Duke health profile, a 17-item measure of health and dysfunction could be, after discussion, accepted by all centers which treat lymphoedematous patients.

EARLY RESULTS  
AFTER LYMPHATIC-VENOUS  
DERATIVE MICSURGICALY  
FOR UPPER LIMB LYMPHEDEMA:  
MY PERSONAL EXPERIENCE  
ROEL VENKEN  
Hospital St. Servaas, Ghent, Belgium

Purpose: Is there improvement in upper limb lymphedema after lymphatic-venous derivative microsurgery?  

Methods: 15 patients (stage III: 9 patients; stage IV: 5 patients; stage V: 1 patient) with secondary arm lymphedema underwent between october 2003 and april 2004 lymphatic-venous derivative microsurgery at the upper arm. An end-to-end anastomosis (inversion technique) was performed between lymphatic vessel(s) (deep and/or superficial) and a side branch of the brachial vein. Post-operative volume measurements (water displacement method) after 1, 3 and 6 months were compared with pre-operative measurements.  

Results: Mean age was 67 years (55-82 years), presence of lymphedema ranged from 1 to 17 years (mean: 4.4 years). Mean pre-operative volume measurements of the affected arm was 2317 ml (1440 ml - 3200 ml). Pre-operative volume difference between the affected limb and the normal limb ranged from 275 ml to 1820 ml (mean 851 ml). Post-operative follow-up 3 patients at 1 month, 7 patients at 3 months, 5 patients at 6 months. All patients noted a subjective improvement. All but one patient had improved post-operative volume measurements. Overall volume reduction was 27.5% after 1 month, 36.3% after 3 months and 46.1% after 6 months.  

Conclusions: Although this is a small group of patients and long-term results are lacking, these early results show improvement in upper limb lymphedema.
LYMPHATIC VESSEL “OVERLOAD” ON THE ARM AFTER AXILLA DISSECTION

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Introduction: Hypertension in lymphatic vessel caused by restriction or closure of its lumen peripherally from the scar in axilla represents a so far unpublished complication of axilla dissection. This phenomenon, which authors call “overload”, is not limited only to the classical axilla dissection during surgery for breast cancer. It very often occurs in patients undergoing surgery for benign affection in the axilla.

Methods: During clinical examination, a limited mobility of shoulder joint and horizontal and/or limited hyperextension in elbow is found. Patient complains about pain on pull coming from the axilla, leading along the inner side of arm into cubitus and on the anterior forearm to the wrist and fingers. Palpation discloses a painful “cord” in the axilla under cubitus bridging axillar or cubital pit. The same painful cord is usually found also on the arm and forearm. Lymphoscintigraphy proves an isolated congestion in the lymphatic vessel, so far without retention of radioactive pharmaceutical in soft tissues.

Results: “Overload” phenomenon is a very frequent cause of unsuccessful rehabilitation of shoulder joint after surgical intervention in the axilla. Moreover, in the wrist area it may imitate syndrome of carpal tunnel. Overload may also be found in the chest and epigastric region distally from the mastectomy scar.

Conclusion: In case of unsuccessful rehabilitation after surgery of axilla or severe subjective complaints in homolateral arm the authors recommend to focus on the overload as a possible cause. If proven, recent experience has so far always sufficed with orally administered proteolytic enzymes and very gentle manual lymphodrainage. The complication is usually managed within 6-8 weeks and an effective shoulder joint rehabilitation can be continued.

DISSECTION OF SENTINEL NODE IN BREAST CANCER – CONDICIO SINE QUO NON?

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Introduction: The conception of sentinel node dissection (SND) proceeds from two aims: to discover condition of regional lymphatic nodes (staging) and to minimize both early and late post-surgical complications following axilla dissection. The authors intend, however, to draw attention to another SND aspect – significantly more precise surgical and histological examination of condition of lymphatic nodes and reduction of possibly false negative results. The authors’ belief based on their own repeated experience is that in total mastectomy sentinel node (SLU) may be removed either with the whole breast or stays off the preparation. Regions where the SLU usually occurs is, thus, not taken heed of anymore during axilla extirpation. Even higher danger of missing and leaving SLU in situ threatens in case of high invasion in axilla during partial mastectomy in discontinuity.

Material and methods: Since May 2001 to June 2002 the authors performed SND in 43 patients (T1-2); the surgery was in all cases finished by dissection of I and II. etage. SLU was labeled by a subcutaneous application of radioactive pharmaceutical above the focus of primary tumor (15 MBq 99mTc Senti-Scint).

Results: SLU was peroperatively identified using gamma-camera in all 43 patients. In 26 patients (60,5%), no metastatic affection of axillary lymphatic nodes was found. In 7 patients (16,2%), nodal metastasis was proven both in the sentinel node and other nodes of I. and II. etage. In 9 patients (21%), metastases were found only in SLU. In 1 patient (2,3%), none of the nodes was affected. Metastatic process has, however, spread into axilla along vessels and nerves.

Conclusion: The authors have shown that if SLU is not unambiguously identified, there may be a risk of up to 21% false negative results “N”. In partial interventions in discontinuity the authors recommend to perform SND every time, even if the surgery is finished by axilla dissection. In total mastectomy, a fundamental attention concerning SLU has to be drawn to the distal parts of I. etage. However, unless SLU has been labeled, its distinguishing from surrounding fat tissue is very difficult.
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