

Striae cutis distensae and possibilities of their medical treatment by the ointment containing extractum cepae, heparine, and alantoine.

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Key words: Striae cutis distensae – therapy

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Striae cutis distensae – synonyms: atrophica lineares, atrophica striata, atrophoderma striatum, striae adolescentium, striae albae, striae atrophicae, striae lividae, vergetures lineaires and others (1,2). They were first described in 1773 (3) by Roeder as relatively small and not very distinct skin changes. In the beginning of the 20th century they were mostly described as mechanically-incurred sub-epidermoid fissures resulting from the breaking of elastic strings due to the effect of pressure (2,4,5). Nowadays, some contemporary works on dermatology do not any longer list striae as a separate nosological unit, these are rather listed as accompanying effects of certain endocrinological diseases or negative impacts of a corticoid therapy. Still, striae certainly represent a serious esthetical as well as psychological problem for a considerable part of the population. Even though they do not cause serious functional impairment, they do have a negative impact on the professional and social realisation of patients in case of certain professions (models, actresses). For the same reason – the aesthetic imperfection, they are the handicap for top sportsmen as well (body-building).

Clinical classification: striae cutis distensae are characterised as atrophic linear skin striae, sometimes slightly bent or undulated, varying in length from several millimetres to as many as 38 centimetres. Their width varies as well – from 1 millimetre up to extremely wide formations with the width of more than 1-6 centimetres (6). They have sharp demarcation, colour changing from pink and blue-red at the beginning to pearl-white colouring similar to scars later. Consistency: always soft. They are typically multiple in occurrence, running along Langer's fissility lines (1,5), nearly parallel to the axis of the body or limbs (sometimes also crosswise – knees, back), They are located symmetrically in the areas of increased skin tension – side parts of the belly, gluteus, upper, front, and lateral parts of thighs, side parts of breasts, knees, back and other locations (1,2,4,5,7,8,9,10). Subjective problems are not reported, exceptionally there are sensations of slight smarting or itching in the initial phase of striae origination. There have also been reported hyperthropic forms of striae cutis distensae, but these later changed into the typical atrophic form (11), as well as special cases of striae, celoid configurations, spontaneous pigmentations, ulcerations, spontaneous ruptures (6,12,13).

With regard to age, striae cutis distensae can be found with children (genetic determination or development in the course of treatment of serious diseases), they very often develop in the puberty with both sexes, with women during pregnancy. Regardless of age and sex, they tend to develop after sudden changes of weight – gaining weight or taking drugs, with physical activities playing an important role as well. Data on bio-types and races in connection with the occurrence of striae cutis distensae generally indicate a higher frequency with white and negroid persons (1). With regard to sex, higher occurrence rate of striae is in the group of women (1,8,10,14), with possible exception of dorso-lumbar striae, where the higher occurrence rate is reported in the group of juvenile boys, this being apparently in connection with the growth acceleration (15,16).

The ethiopathogenetic causes of striae cutis distensae can be sub-classified into several main groups:

- Mechanical distensions, traumas (according to some authors, mechanical factors are not considered to be causes, but rather supplementary determining moments)
- Biochemical causes (hormones, metabolism disorders, toxic substances)
- Genetic predisposition
- Pregnancy (occurring frequently in the areas related to specific dermatosis of pregnant women – toxæmic rash, prurigo, urticarial vasculitidis)

A specific group is made up of clinical correlations with other serious diseases (1):

- Infectious and consumptive diseases (for example TBC pulmonum, pneumonia, fever conditions, Hodgkin disease, nephritis and others)
- Metabolic and endocrinological diseases (Cushing syndrome, obesities, diabetes mellitus type 1 and others)
- Anetodermis
- Marfan syndrome, Buschke-Ollendorf syndrome, pseudohermatoma elasticum, calcinosis cutis)
- Dystrophic skin changes (senile elastosis, aknetic elastosis)
- Localised skin tension (oedemas, tumours)
- Others

The corticoid therapy of serious diseases (long-term therapy in particular) as well as ill-judged using of anabolics have been known as causes of striae for quite a long time, which has also been proven by multiple observations (1,6,8,9,10,13,17,18).

Histology: particularly the changes of elastic strings, their decomposition, abruption, fragmentation, or even complete disappearance. At the boundaries of defects the strings are

present in clusters and decomposed, collagen homogenisation has taken place (8,10). From the historical point of view, the first description of striae was made in 1889 by Troisier and Ménétiér (19) and in 1894 by Unna (20). Nowadays there have been a number of scientific works written, focusing on the analysis of particular structures: elastic and collagen strings, fibroblasts, skin adnexes.

Differential diagnostics of striae is not very difficult. In 1989, however, Bucket and coll. listed a new clinical unit called linear focal elastosis or elastosis striae, and it is necessary to distinguish this diagnosis from striae atrophicae. This issue was later discussed by White (22) in his work in 1992. When localised on the lower lip, it is necessary to distinguish it from the microform of lip cleavage (23).

The majority of authors present clearly sceptical opinions with regard to the treatment of striae (4,5,7,8,9,13,24). From the historical point of view, we can mention a humorous view of the Czech professor Šamberger, who proclaimed in 1925 (4): “There is no cure for striae. We can only struggle to prevent their origination by means of reasonable lifestyle, suitable physical activities at work, through sports activities and during pregnancy. And don’t forget: The easiest way how to support striae is to live a lazy life!”

Even nowadays the possibilities of therapeutical treatment of striae are relatively limited and of little effect. A method invented by Italian physicians called TRILIX seems to be quite elegant, there have been occasional attempts at using laser therapy, surgery remodelling, combined methods, and conservative therapy. The above-mentioned therapeutic methods are hardly ever aesthetically satisfactory. Furthermore, it is often not possible to use these methods due to a variety of reasons and their effects are often disputable. Eventually, patients often have to resort to camouflage techniques.

For several past years, our medical facility has been dealing with conservative methods of treatment of hypertrophic scars and keloids (25,26,27,28). In connection with these issues, in 1996 we started to work with an interesting product - Contractubex[®] gel (Merz Pharma). The effective substances are extractum cepae, heparine, and alantoine in a serol gel formula. The range of indications to be treated with Contractubex[®] gel is wide: hypertrophic keloid, movement limiting and cosmetically disturbing scars after operations, amputations, burns, and injuries. It is successful in the treatment of Duputryens contractures, traumatic contractures of the tendons, deforming scars, and atrophic scars. Since the range of indications for Contractubex[®] gel includes also atrophic scars and striae cutis distensae are in essence atrophic changes, we decided to use the ointment for the treatment of patients with

this diagnosis. First and very satisfactory results of the treatment were presented in the years 1999 and 2000 (29,30).

The following overview presents a summary of results as of March, 31st, 2001.

Material and Methods

The observations took place at the Department of Dermatology, Svidnik Hospital, from February, 1st, 1998 to March, 31st, 2001. The observation sample was made up of 26 patients (17 female, 9 male patients) with the average age of 25.8 years (19.9 female, 25.2 male patients). Diagnoses: striae cutis distensae – femoris, abdominis, dorsi thoracis, antebrachii, glutealis. Disease duration: ranging from 2 months to 6 years. As a part of treatment Contractubex[®] gel, Metz Pharma, was used. Composition: Active substances (per 100 g): Extractum cepae 10,0 g, Heparine- natrium 5 000 I.U., allantoin 1,0 g, methyl-4-hydroxybenzoate 0,15 g in a watersoluble gel basis without lipid content. Packed in tubes of 20, 50, 100 g. With regard to the presence of parabens, patients with the positive history of hypersensitivity or allergy to parabens were excluded from the study. The ointment was applied two times a day by means of an elaborated technique of massage. An individual training of each patients was performed by qualified medical personnel. Massages were performed by gentle pressure applied by two joined fingers. 10 massage movements were performed following the precise order (each movement repeated 10 times), two times a day.

Massage Technique Description (applicable in the treatment of keloid and hypertrophic scars, striae cutis distensae):

1. Circular movement, right-hand direction
2. Circular movement, left-hand direction
3. One circle – right-hand direction, the other circle – left-hand direction (direction changing)
4. Zigzag movement, always from top to bottom along the length of striae
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7. Octal movement (8-shaped pattern), right-hand direction
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10. Gentle vibrations or, if the technique hasn't been mastered, gentle tapping.

The patients were using Contractubex[®] gel for the average span of 6 months (3 – 19 months). During the treatment they performed their personal hygiene with recommended non-irritating preparations – syndets or liquid soaps with the addition of ichtamole, they also used cotton towels and underclothes.

Following our positive experience with the application of occlusion in patients with keloid scars, who were treated with Contractubex[®] gel, we applied this methodology also for the treatment of accessible parts of 15 of our patients. For the first time, we applied night occlusion after one-month treatment, when it was proven that patients tolerated the preparation without complications. Biocclusive transparent dressing, Johnson and Johnson, was used. The overall time of using the occlusion for patients was 3 months.

Results

The tolerance of the preparation was excellent with all patients under observation. None of them interrupted the treatment or reported any negative side effects. The doctors as well as patients arrived at the same conclusion when evaluating the effects of the treatment: there was a considerable positive cosmetic effect, with the majority of the patients the reduction of striae by more than 2/3 was reported, along with positive colour changes. Patients that were exposed to the application of the ointment soon after symptoms of the disease were discovered indicated the stoppage of progression, in three cases there was a complete disappearance of negative changes caused by the disease.

Evaluation: excellent results (excellent cosmetic effect, striae reduction by more than 2/3) – 16 patients (61.5%), good results (satisfactory cosmetic effect, colour fading, reduction by 1/3) – 7 patients (26.9%), fair results (satisfactory cosmetic effect, colour fading of striae to match skin colour, slight reduction) – 3 patients (11.5%), no observable effect – 0 patients.

Discussion

The results of local therapeutical treatment of striae cutis distensae by means of Contractubex[®] gel, Merz Pharma, analysed in the sample of 26 patients over the time span of 6 months on average, were excellent. In comparison with other known and used methods, this method is also convenient for the patient, painless, economically acceptable. Some of the patients have been under observation for nearly two years and the resultant effect was

permanent. In case of the occurrence of new symptoms, the patients spontaneously begin with the treatment of the affected location. The best results have been achieved in the case of a 23-year-old woman, where extensive or even generalised striae (limbs, belly, hips, thighs, glutea) appeared two weeks after childbirth. Over next two months, the disease considerably progressed (Fig. 1, 2). Striae were in some areas as much as 1 cm wide, of distinct purple-red colouring, smarting sensations were reported. The patient underwent an unsuccessful laser therapy. She was rather sceptical when starting with the application of Contractubex[®] gel by means of the recommended massage method. After a one-month period of application, positive changes could be observed and after two-month application the curing effect was evident (Fig. 3,4). The patient spontaneously continued using the method for the next 11 months, to her full satisfaction with the final result of the treatment.

We believe that the chosen method – the elaborated massage technique with simultaneous application of Contractubex[®] gel has its justification. A gentle but directed massage stimulation of the affected location leads to improvement in blood repletion and probably to reparation and regeneration of elastic strings and disruption of collagen homogenisation. The composition of the applied preparation Contractubex[®] gel containing the effective substance heparin and its contribution to the overall effect cannot be neglected. Histological examination of areas being cured could not be performed due to technical reasons, it was spontaneously rejected by the patients.

In essence there are no contraindications limiting the use of Contractubex[®] gel (except for people sensitive to parabens) and it can be used practically for all age categories, with very simple application. Its combination with transparent-film occlusion has been proven beneficial. This method does not limit patient's daily duties or hobbies in any way.

It is, however, of high importance to inform patients that it is necessary to avoid any physical irritations and protect areas being treated against extreme cold or ultraviolet radiation. Massage treatment has to be correctly applied, without excessive pressure, it is necessary to prevent micro-traumas from occurring.

Conclusion

The application of Contractubex[®]gel represents a classical conservative mono - or combined therapy. The therapy is convenient to the patient, non-aggressive, painless and economically acceptable. Excellent tolerance, practically no contraindications, possible

application with children and high percentage of successful therapy are all attributes, which open the road for more extensive usage of this preparation.

Nearly all observed patients indicated positive affection of the local status of the disease. The efficiency ratio was high (88,4%). The therapy Striae cutis distensae with Contractubex®gel containing extractum cepae, heparin and alantoina is a very elegant and highly effective therapeutic option, which should be used in the medical practice.

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Summary

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Striae cutis distensae are an important esthetic as well as psychological problem for a large part of the population. Although they do not cause significant functional impairment, with certain patients (models, actors) however they do limit their professional and social realization. Therapeutic options have been relatively uncertain, seldom esthetically satisfying, not always applicable and the effect was disputable (TRILIX, laser therapy, surgical remodeling, combined methods, conservative therapy). Application of ointment containing extractum cepae, heparin and alantoine (Contractubex® gel, Merz Pharma) in serol gel formula is one of the recent elegant conservative methods. Results of local therapy in the duration of three to six weeks with the ointment containing extractum cepae, heparin and alantoine (Contractubex® gel,) with 26 patients (17 females, 9 males, age average 25.8 yrs) with striae cutis distensae of different extent are excellent and comparable with other so far used methods. There are no known contraindication for this preparation. It is suitable for all age categories, application is simple and the tolerance is excellent.

Key words: Striae cutis distensae - therapy

Texts accompanying photographs:

Fig. 1 – Striae cutis distensae on hips and thighs – before Contractubex[®] gel therapy

Fig. 2 - Striae cutis distensae on the inner side of a thigh – before Contractubex[®] gel therapy

Fig. 3, 4 – The same patient after two months of treatment

ABP Schwager
großhelfer
CTX

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10. Gentle vibrations or, if the technique hasn't been mastered, gentle tapping.

The patients were using Contractubex® gel for the average span of 6 months (3 – 19 months). During the treatment they performed their personal hygiene with recommended non-irritating preparations – syndets or liquid soaps with the addition of ichtamole, they also used cotton towels and underclothes.

Following our positive experience with the application of occlusion in patients with keloid scars, who were treated with Contractubex® gel, we applied this methodology also for the treatment of accessible parts of 15 of our patients. For the first time, we applied night occlusion after one-month treatment, when it was proven that patients tolerated the preparation without complications. Biocclusive transparent dressing, Johnson and Johnson, was used. The overall time of using the occlusion for patients was 3 months.

Results

The tolerance of the preparation was excellent with all patients under observation. None of them interrupted the treatment or reported any negative side effects. The doctors as well as patients arrived at the same conclusion when evaluating the effects of the treatment: there was a considerable positive cosmetic effect, with the majority of the patients the reduction of striae by more than 2/3 was reported, along with positive colour changes. Patients that were exposed to the application of the ointment soon after symptoms of the disease were discovered indicated the stoppage of progression, in three cases there was a complete disappearance of negative changes caused by the disease.

Evaluation: excellent results (excellent cosmetic effect, striae reduction by more than 2/3) – 16 patients (61.5%), good results (satisfactory cosmetic effect, colour fading, reduction by 1/3) – 7 patients (26.9%), fair results (satisfactory cosmetic effect, colour fading of striae to match skin colour, slight reduction) – 3 patients (11.5%), no observable effect – 0 patients.

Discussion

The results of local therapeutical treatment of striae cutis distensae by means of Contractubex® gel, Merz Pharma, analysed in the sample of 26 patients over the time span of 6 months on average, were excellent. In comparison with other known and used methods, this method is also convenient for the patient, painless, economically acceptable. Some of the patients have been under observation for nearly two years and the resultant effect was

permanent. In case of the occurrence of new symptoms, the patients spontaneously begin with the treatment of the affected location. The best results have been achieved in the case of a 23-year-old woman, where extensive or even generalised striae (limbs, belly, hips, thighs, glutea) appeared two weeks after childbirth. Over next two months, the disease considerably progressed (Fig. 1, 2). Striae were in some areas as much as 1 cm wide, of distinct purple-red colouring, smarting sensations were reported. The patient underwent an unsuccessful laser therapy. She was rather sceptical when starting with the application of Contractubex[®] gel by means of the recommended massage method. After a one-month period of application, positive changes could be observed and after two-month application the curing effect was evident (Fig. 3,4). The patient spontaneously continued using the method for the next 11 months, to her full satisfaction with the final result of the treatment.

We believe that the chosen method – the elaborated massage technique with simultaneous application of Contractubex[®] gel has its justification. A gentle but directed massage stimulation of the affected location leads to improvement in blood repletion and probably to reparation and regeneration of elastic strings and disruption of collagen homogenisation. The composition of the applied preparation Contractubex[®] gel containing the effective substance heparin and its contribution to the overall effect cannot be neglected. Histological examination of areas being cured could not be performed due to technical reasons, it was spontaneously rejected by the patients.

In essence there are no contraindications limiting the use of Contractubex[®] gel (except for people sensitive to parabens) and it can be used practically for all age categories, with very simple application. Its combination with transparent-film occlusion has been proven beneficial. This method does not limit patient's daily duties or hobbies in any way.

It is, however, of high importance to inform patients that it is necessary to avoid any physical irritations and protect areas being treated against extreme cold or ultraviolet radiation. Massage treatment has to be correctly applied, without excessive pressure, it is necessary to prevent micro-traumas from occurring.

Conclusion

The application of Contractubex[®]gel represents a classical conservative mono - or combined therapy. The therapy is convenient to the patient, non-aggressive, painless and economically acceptable. Excellent tolerance, practically no contraindications, possible

application with children and high percentage of successful therapy are all attributes, which open the road for more extensive usage of this preparation.

Nearly all observed patients indicated positive affection of the local status of the disease. The efficiency ratio was high (88,4%). The therapy Striae cutis distensae with Contractubex®gel containing extractum cepae, heparin and alantoine is a very elegant and highly effective therapeutic option, which should be used in the medical practice.

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Summary

Striae cutis distensae and possibilities of their medical treatment by the ointment containing extractum cepae, heparin, and alantoine.

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Striae cutis distensae are an important esthetic as well as psychological problem for a large part of the population. Although they do not cause significant functional impairment, with certain patients (models, actors) however they do limit their professional and social realization. Therapeutic options have been relatively uncertain, seldom esthetically satisfying, not always applicable and the effect was disputable (TRILIX, laser therapy, surgical remodeling, combined methods, conservative therapy). Application of ointment containing extractum cepae, heparin and alantoine (Contractubex® gel, Merz Pharma) in serol gel formula is one of the recent elegant conservative methods. Results of local therapy in the duration of three to six weeks with the ointment containing extractum cepae, heparin and alantoine (Contractubex® gel,) with 26 patients (17 females, 9 males, age average 25.8 yrs) with striae cutis distensae of different extent are excellent and comparable with other so far used methods. There are no known contraindication for this preparation. It is suitable for all age categories, application is simple and the tolerance is excellent.

Key words: Striae cutis distensae - therapy

Texts accompanying photographs:

Fig. 1 – Striae cutis distensae on hips and thighs – before Contractubex[®] gel therapy

Fig. 2 - Striae cutis distensae on the inner side of a thigh – before Contractubex[®] gel therapy

Fig. 3, 4 – The same patient after two months of treatment