



# ARTICLE

## **“A PILOT STUDY TO EVALUATE THE EFFICACY OF MULTI-GYN GEL IN THE TREATMENT OF NONSPECIFIC VULVITIS AND VAGINITIS**

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## MULTI-GYN ACTIGEL AND THE TREATMENT OF NONSPECIFIC VULVITIS AND VAGINITIS

### Summary

*Objectives:* To investigate the efficacy of the application of Multi-Gyn Gel for the relief of the symptoms of nonspecific vulvitis and vaginitis. *Study methods;* Patients participated in this pilot study with Multi-Gyn Gel when no diagnosis could be made for the cause of the inflammatory complaints such as of a virulent candidiasis or bacterial vaginosis and no medication was prescribed. The complaints were evaluated by the Visual Vagina/Vulva Score as made up from the sum of the number given by the investigator for discharge, smell of the discharge, color of the discharge, redness of the vagina and vulva and the swelling of this area, the VAS score in which the patient indicates the seriousness of the complaints with a point on a scale of 10 cm and the Trouble score in which the patient expresses the seriousness of the complaint in a cipher. The patient was asked to apply the product during one week and to return in 2 weeks for a control visit. The patient was to report daily in the patient diary on the seriousness of the complaint with the use of the VAS Score and the Trouble Score number and to comment on the treatment. The rationale of the one-week treatment and one-week no treatment was that one of the investigators wanted to collect information on the recurrence of the complaint after treatment with Multi-Gyn Gel was stopped. The vaginal smear was optional. *Results;* The complaint disappeared completely and without recurrence after just one week treatment with Multi-Gyn Gel in 16 of the 50 patients. In 3 patients during the one-week treatment but recurred during the week without treatment. In another 3 patients the complaint improved considerably, but worsened again during the one week without treatment. 7 patients did not benefit from treatment with Multi-Gyn Gel. *Conclusion;* From the results of this pilot study on the efficacy of one week treatment with Multi-Gyn Gel and the evaluation of the lasting results after one week no treatment of atypical vulvitis and - vaginitis it can be concluded that Multi-Gyn Gel is a great relief for the complaints (64%) and often a complete cure. Multi-Gyn Gel could take position between medication and hygienic measures for the treatment of frequent 'intimate' complaints. It greatly improves 'the quality of life' by a strong itch stopping and soothing effect.



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## 1. Introduction

Evidently there are only 2 solutions for problems in the vaginal area:

- a medical solution such as treatment with antibiotics, anti-mycotics, corticosteroids etc. for serious problems
- a hygienic solution such as a vaginal douche.

However, the greater percentage of complaints in this area are on the one hand not serious enough for medical treatment, but on the other hand will not react sufficiently to a mere hygienic measure.

Multi-Gyn Gel was developed because the Case Reports of Multi-Skin cream and gel also reported treatment of complaints in the vaginal area such as itch, pain, dryness and inflammation. The Multi-Skin products are designed for application on the skin and the composition is not optimal for application on mucous tissues. Therefore it needed to be adapted, resulting in the product Multi-Gyn Gel that adheres well to mucous tissues. Clinical results of Multi-Oral Gel had also shown improvement in irritation and inflammation in the oral cavity.

This pilot study was set up to obtain a better understanding of the indications for application of Multi-Gyn Gel in the treatment of complaints of the vagina and vulva and the results for each individual indication.

We have also made an effort to support the indications and the results with the evaluation of a vaginal smear before and after treatment. In this pilot study this was optional, because some investigators did not want to expose their patients more than necessary before positive treatment results with Multi-Gyn Gel were proven.

The indication for participation in this pilot study was atypical vulvitis and vaginitis, meaning that no diagnosis for the cause of the inflammatory complaints could be made and Multi-Gyn Gel was not interfering with prescription medication for the condition.

## 2. Multi-Gyn Gel

Multi-Gyn Gel<sup>1</sup> combines a low pH of 4.1 with the therapeutic properties of bio-active polysaccharides 2QR complex, its main component. The gel adheres well to mucous and immediately installs the optimal vaginal pH.

Multi-Gyn Gel is a "bio-active gel". 2QR provides a physical block to harmful bacteria; preventing them from adhering to vaginal tissue, thus preventing inflammation which in turn prevents infection and supports the natural healing process thereby eliminating the discomforts of irritated tissue (sensitivity, redness, swelling, burning and irritation).

## 3. Materials

The investigators received Multi-Gyn Gel, product information leaflets and patient diaries to hand out to patients who wanted to participate in this pilot study.

The investigators were also provided with all materials for the optional vaginal Papanicolaou smears to be taken before and after treatment. These materials were provided by the Leiden Cytology and Pathology Laboratory .

<sup>1</sup> Multi-Gyn Gel is now called Multi-Gyn ActiGel.

The investigator binder contained the "instructions for the investigator", the "patient list", the patient CRF's (Clinical Research Forms) for the registration of the data before and after treatment and pockets for the collection of the patient diaries.

#### 4. Methods

The patient was selected during a regular visit to her physician or gynecologist when she mentioned to be 'annoyed' by complaints such as dryness, excessive discharge, itch, dryness and soreness, pain e.g. during intercourse etc. The patient was asked to participate in this pilot study with Multi-Gyn Gel when no diagnosis could be made and no indication for prescription treatment was present such as a virulent candidiasis or bacterial vaginosis. The investigator proceeded with the completion of the CRF of this pilot study. The evaluation of the seriousness of the complaints by the visual Vagina/Vulva Score (VAS Score) was performed by the investigator as well as the (optional) vaginal smear. The Vagina/Vulva Score was made up from the sum of the number given by the investigator for discharge, smell of the discharge, color of the discharge, redness of the vagina and vulva and the swelling of this area. Normal was 0, a little abnormal 1, rather abnormal 2 and very abnormal 3.

The investigator had to explain the use of the VAS score on which the seriousness of the complaint had to be indicated by the patient with a point on a scale of 10 cm. Patient also had to give a score number (Trouble score) to the trouble she perceived from the complaint: 0 = no trouble, 10 very much trouble. The patient was asked to apply the product during one week and to return in 2 weeks for a control visit. The patient was to report daily in the patient diary on the seriousness of the complaint with the use of the VAS Score and the Trouble Score number and to comment on the treatment.

The rationale of the one-week treatment and one-week no treatment was that one of the investigators wanted to collect information on the recurrence of the complaint after treatment with Multi-Gyn Gel was stopped.

The smears were evaluated by Dr. Boon of the Leiden Cytology and Pathology Laboratory. All data from the CRF's were entered into the database that was prepared by the statistician. Since the smears were optional, these results have not been evaluated by the statistician. They will be discussed separately.

#### 5. Results

The parameters for the efficacy of the treatment with Multi-Gyn Gel were the Visual Vagina/Vulva Score, the VAS score and the Trouble Score before and after treatment. The distribution in age groups was: 29 patients age < 30 years, 12 patients age > 30 - < 45 years and 9 patients > 45 years. (See table 1 for the results obtained in these age groups as calculated from the VAS-score). In the age group < 30 years the efficacy was 62 %, in the one of > 30 - < 45 years 68 % and in the one > 45 years 63 %. The average complaint was 6.86 before treatment and 2.49 after treatment, resulting in an average efficacy of the treatment with Multi-Gyn Gel gel of the complaints of 64 %. In total 29 + 12 + 9 = 50 patients participated. (See table 2 for the results of "all patients selected" as calculated from the VAS-score.)

The complaints that have been indicated in this study for possible treatment with Multi-Gyn Gel were:

- itch - 34 patients (see table 3).
- dryness, soreness - 16 patients (see table 4)

- burning - 15 patients (see table 5)
- discharge - 8 patients (see table 6)
- coitus problem - 4 patients (see table 7)
- pain - 14 patients (see table 8)

The results of the vagina/vulva scores as noted by the physician upon observation of the appearance of the irritation of the area is presented in table 9.

The complaint disappeared completely and without recurrence after just one week treatment with Multi-Gyn Gel in 16 of the 50 patients.

From the available patient diaries it was noted that the complaint had also disappeared completely in 3 patients during the one-week treatment but recurred during the week without treatment.

In another 3 patients the complaint improved considerably, but worsened again during the one week without treatment.

7 patients did not benefit from treatment with Multi-Gyn Gel. One of these was a 2 year old child of which the physician concluded eventually that the infection was probably caused by physical damage of the vagina: it was then given antibiotics. The other 6 patients noted nevertheless that they benefited from a soothing and itch stopping effect. 3 patients of this group were > 45 years and 3 patients > 30 < 45 years.

It can be concluded that an average improvement of 64 % for the severity of the complaints is a very encouraging result of the application of Multi-Gyn Gel in atypical vulvitis and vaginitis.

## 6. Vaginal smears

The vaginal smears in this pilot study were optional and have been performed on 27 patients before and after treatment. Only in 7 patients the microbiology before treatment was abnormal. In 5 cases an abnormal coccoïd flora was noted with a high number of granulocytes. In 2 cases Trichomonads were detected in the pre-treatment smear. The other smears showed evidence of inflammation with the presence of granulocytes.

In all 27 cases the improvement after treatment could be seen macroscopically as well as microscopically. (see picture 1)

In the 2 cases with Trichomonas in the pre-treatment smear, the post-treatment smear was clean with a lactobacilli flora devoid of Trichomonas.

In the 5 cases with a coccoïd overgrowth in the pre-treatment smear, the post treatment smear showed a healthy lactobacilli flora. (see pictures 2 and 3)

All other smears were judged microbiologically 'normal' while the patient was indicating to be seriously troubled by a complaint! With these observations it becomes apparent that in many cases there is hardly a relationship between the seriousness of complaints such as itch and burning and the cytology of the smear.

Therefore the cytological diagnosis cannot be solely used as an instrument for the evaluation of the source nor the seriousness of this group of complaints. Other methods should be applied and these should probably be found in biochemical analyses of intercellular processes of the tissues.

## 7. Discussion

This pilot study showed a high efficacy of the treatment with Multi-Gyn Gel in the relief of complaints of the vagina and vulva, which are usually not serious enough and/or without a diagnosis to be medically treated with e.g. antibiotics, antimycotics or corticosteroids and which are persistent with extended hygienic measures such as vaginal douches.

The patients which were included in this study could not be diagnosed but for 'atypical' vulvitis and -vaginits, which is in fact a non-diagnosis. No medication was withheld on patients and patients with a diagnosis such as candida or bacterial vaginosis which would be routinely treated were not to be included.

The vaginal smears however showed in 5 cases the presence of coccoïd overgrowth - a Gardnerella pattern - and in 2 cases the presence of trichomonas before treatment. In all cases the smear pattern returned to a normal lactobacilli flora after treatment.

Not all patient diaries were retrieved and 12 diaries have been lost during the move of the department to another hospital location of one of the investigators. 27 diaries could be checked for the course of the study period and comments.

In 6 patients the diaries indicated that the complaint had disappeared or improved considerably during the one-week treatment but reappeared afterwards. These last scores have been evaluated in the study results.

Looking at the one-week treatment results including this group of 6 patients the efficacy would be considerably higher.

The seriousness of the complaint as indicated by the VAS score and the Hinder (Trouble) score was similar: Patients could visualize as well as estimate the number for the level of annoyance they experienced from their complaint to the same degree.

All indications previewn in the CRF for the use of Multi-Gyn Gel in this pilot study have been stated. The only new indication was the problem of pain during or after coitus which was specifically indicated by some patients. In view of the results obtained in the indications pain, dryness and soreness it is not surprising that Multi-Gyn Gel is being applied for this problem.

Itch is apparently the most frequent and most "annoying" problem -34 patients-, followed by dryness, soreness -16 patients-, burning - 15 patients, pain 14 patients- discharge -8 patients and coitus problem -4 patients. Treatment with Multi-Gyn Gel showed a great relief in all these problems.

The larger group of patients was of the age group < 30 years (29 patients), followed by the one of > 30 - < 45 years (12 patients) and > 45 years (9 patients).

The treatment results as evaluated from the Vagina/Vulva score could give rise to the suggestion that other underlying processes such as atrophic post menopausal vaginal tissue are giving reason to the complaints of older women. However the number of this older patient group is not substantial enough for conclusions.

The results as evaluated by the VAS score and the Trouble score did not show large differences between the age groups.



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### 8. Conclusion

From the results of this pilot study on the efficacy of one week treatment with Multi-Gyn Gel and the evaluation of the lasting results after one week no treatment of atypical vulvitis and -vaginitis it can be concluded that Multi-Gyn Gel is a great relief for the complaints (64%) and often a complete cure.

Multi-Gyn Gel could take position between medication and hygienic measures for the treatment of frequent 'intimate' complaints. It greatly improves 'the quality of life' by a strong itch stopping and soothing effect.

From the available number of the (optional) vaginal smears we have come to the preliminary conclusion that these don't offer a trustworthy tool for the diagnosis of the source of this group of complaints. In the small number of cases with a non-physiological flora and/or inflammatory pattern and/or trichomonas, we saw that after treatment the cytology had returned to normal.

Delft, May 1996

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#### **Pathologist:**

Dr. M. E. Boon, Leiden Cytology and Pathology Laboratory, Leyden

#### **Analytical Data Management:**

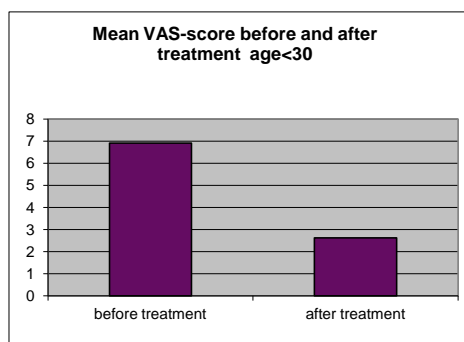
Dr. D. Goedhart, Arnhem



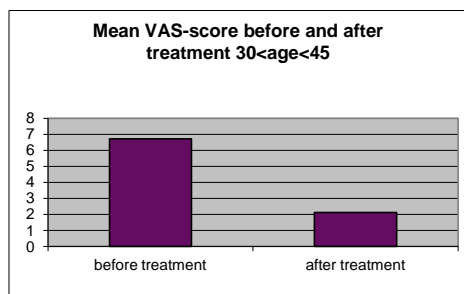
## Appendix 1: data

Table 1

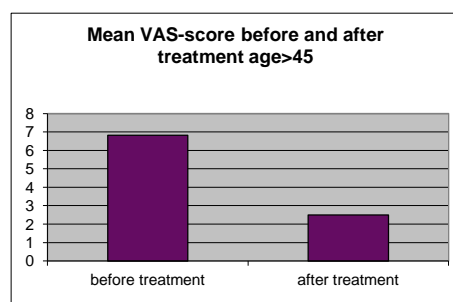
	Mean	Std. Dev.	Min.	max.	N
<b>Patients age &lt;30</b>					
before treatment	6,92	1,31	4,00	9,20	29,00
after treatment	2,63	2,36	0,00	8,00	28,00



	Mean	Std. Dev.	Min.	max.	N
<b>Patients 30 &lt;age &lt;45</b>					
before treatment	6,72	1,47	4,00	8,00	12,00
after treatment	2,12	3,38	0,00	8,00	11,00

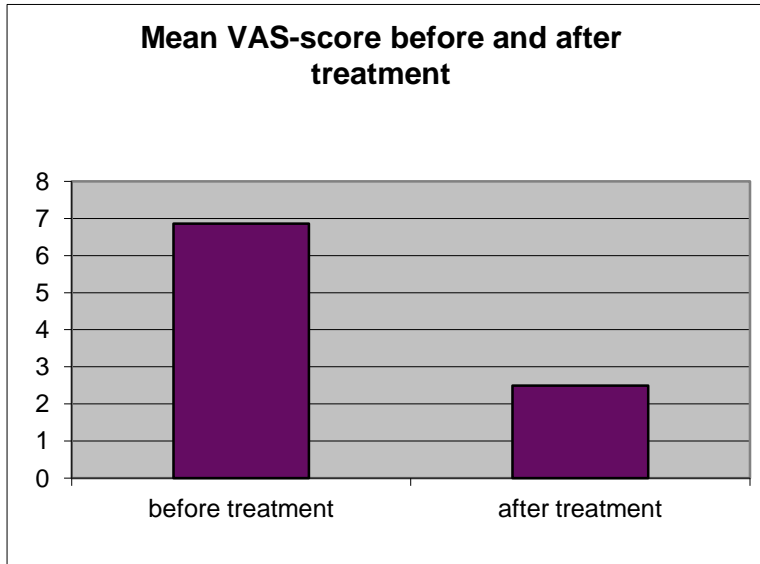


	Mean	Std. Dev.	Min.	max.	N
<b>patients age &gt;45</b>					
before treatment	6,83	1,41	5,00	9,00	9,00
after treatment	2,50	2,67	0,00	8,00	8,00



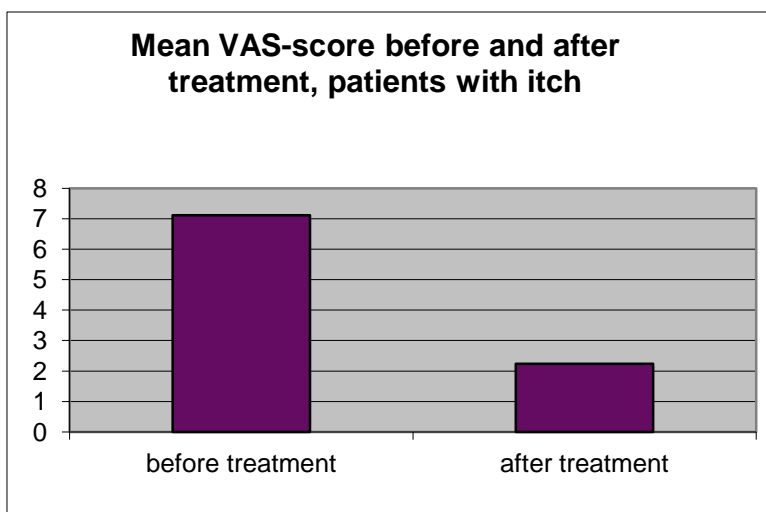
**Table 2**

All patients selected	Mean	Std. Dev.	Min.	max.	N
before treatment	6,86	1,34	4,00	9,20	50,00
after treatment	2,49	2,62	0,00	8,00	47,00



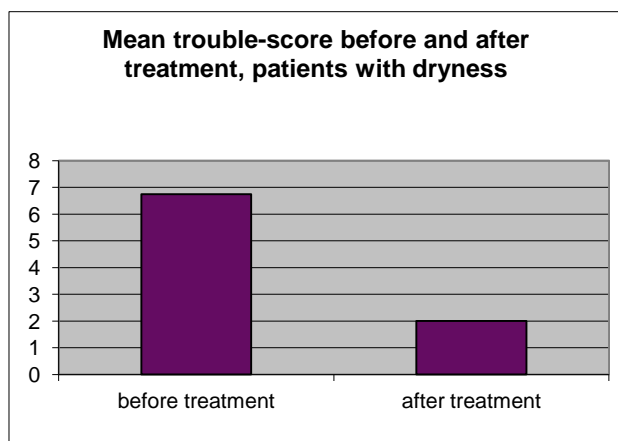
**Table 3**

only patients with itch	Mean	Std. Dev.	Min.	max.	N
before treatment	7,11	1,22	4,50	9,20	34,00
after treatment	2,24	2,60	0,00	8,00	32,00



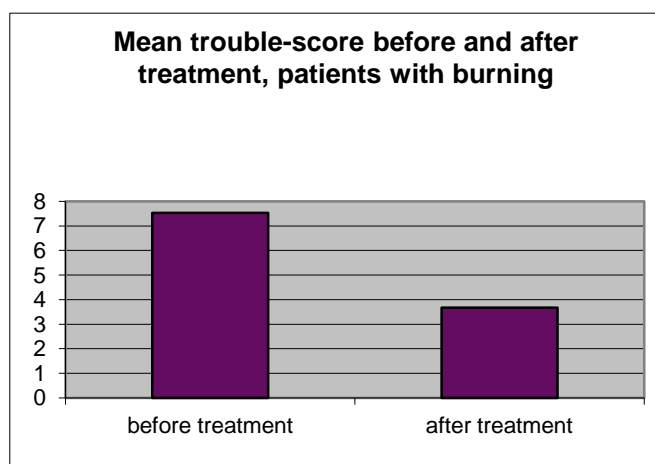
**Table 4**

<i>Mean trouble-scores before and after treatment with MultiGyn</i>					
only patients <b>with dryness</b>	Mean	Std. Dev.	Min.	max.	N
before treatment	6,75	1,06	4,00	8,00	16,00
after treatment	2,00	2,61	0,00	7,00	16,00



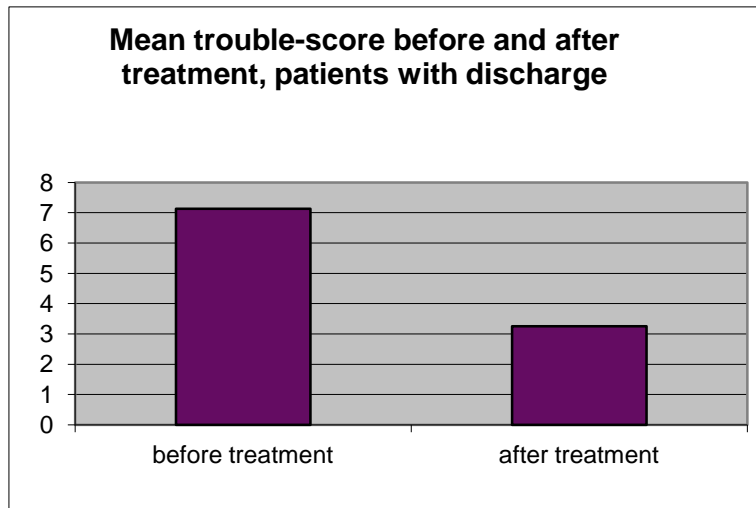
**Table 5**

<i>Mean trouble -scores before and after treatment with MultiGyn</i>					
only patients <b>with burning</b>	Mean	Std. Dev.	Min.	max.	N
before treatment	7,53	0,74	6,00	9,00	15,00
after treatment	3,67	2,89	0,00	8,00	15,00



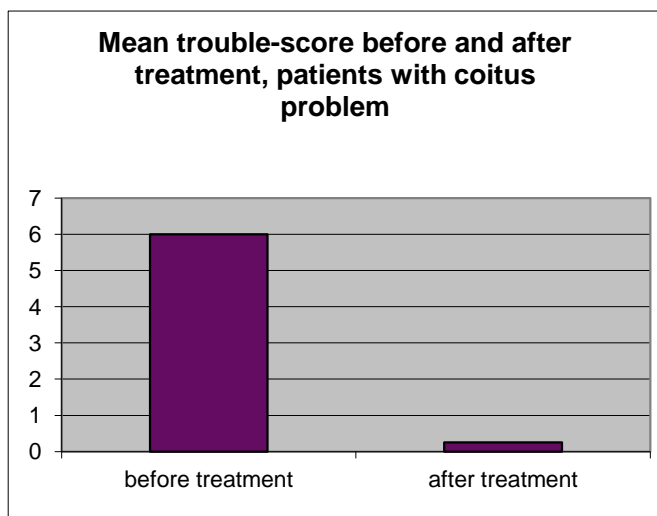
**Table 6**

<i>Mean trouble-scores before and after treatment with MultiGyn</i>					
only patients <b>with discharge</b>	Mean	Std. Dev.	Min.	max.	N
before treatment	7,13	1,46	5,00	9,00	8,00
after treatment	3,25	1,75	1,00	6,00	8,00



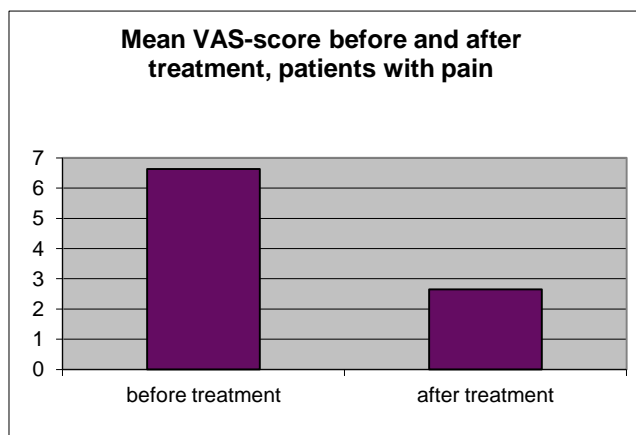
**Table 7**

<i>Mean trouble -scores before and after treatment with MultiGyn</i>					
only patients <b>with coitus problem</b>	Mean	Std. Dev.	Min.	max.	N
before treatment	6,00	1,63	4,00	8,00	4,00
after treatment	0,25	0,50	0,00	1,00	4,00



**Table 8**

only patients with pain	Mean	Std. Dev.	Min.	max.	N
before treatment	6,63	1,56	4,00	9,00	14,00
after treatment	2,65	2,84	0,00	8,00	13,00

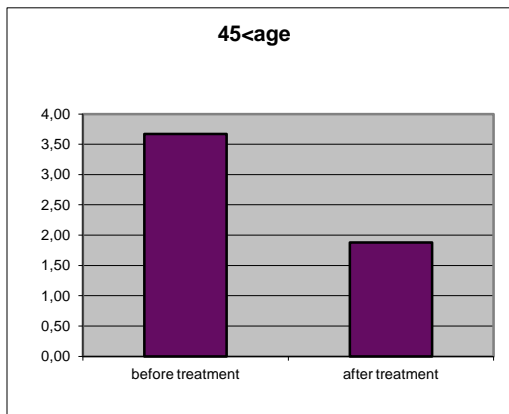
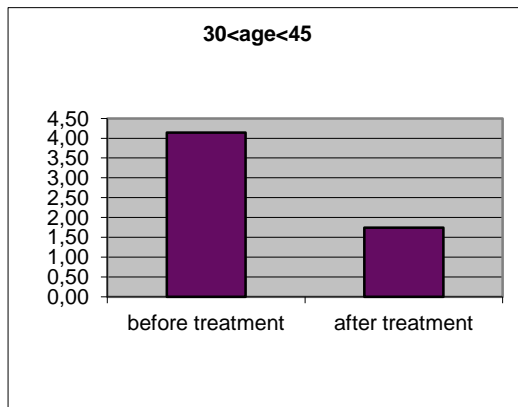
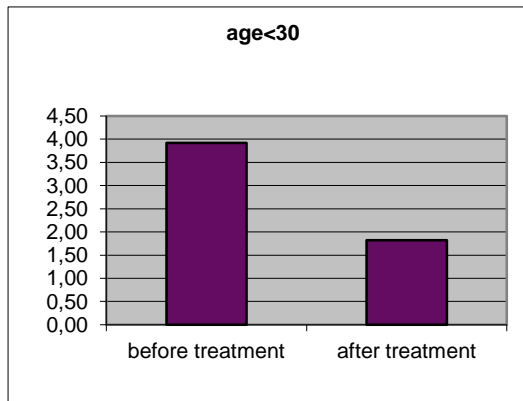


**Table 9**

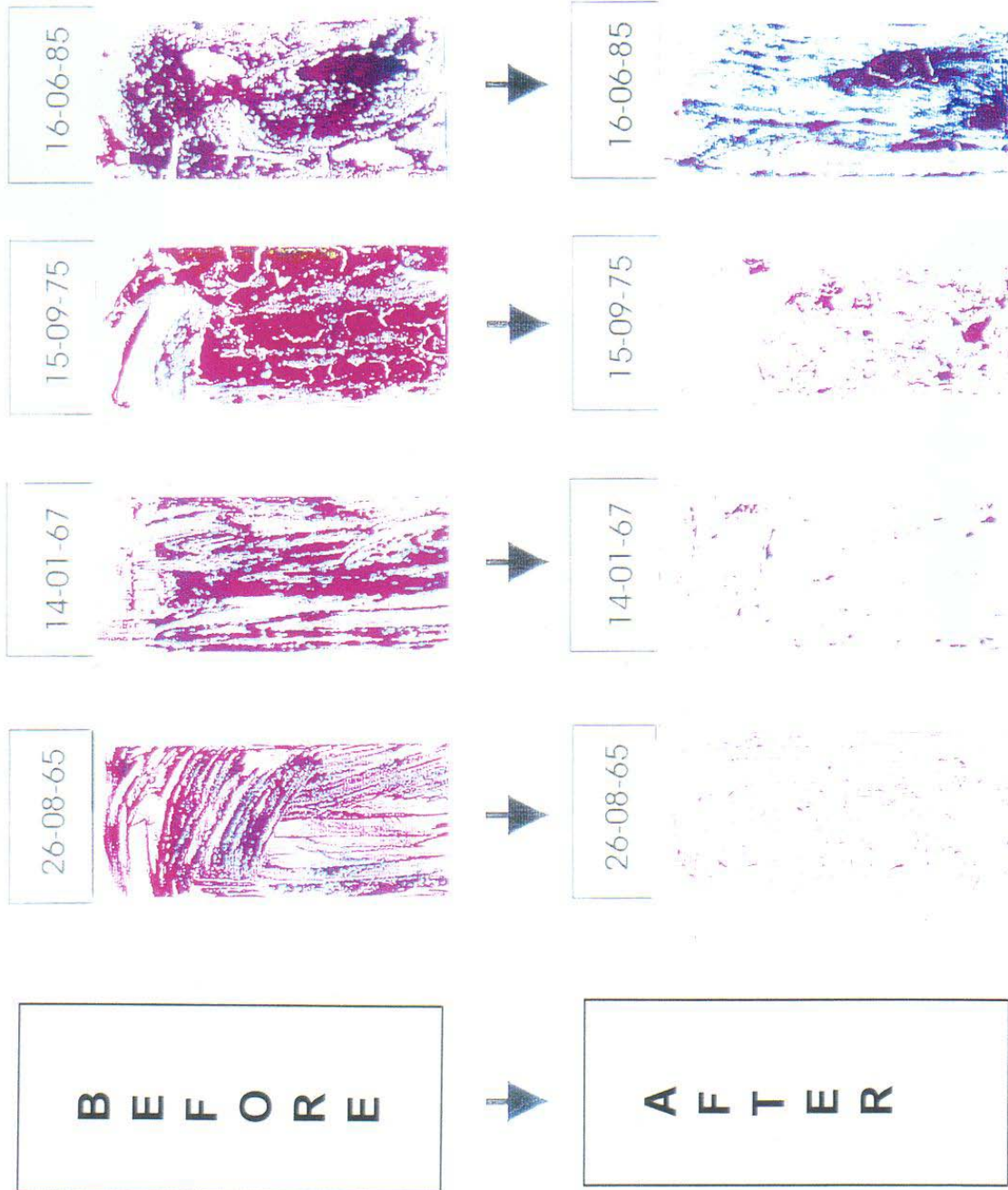
<i>Mean vagina/vulva-scores before and after treatment with Multi-Gyn</i>					
<b>Patients age &lt;30</b>	mean	std. Dev.	min.	max.	N
before treatment	3,92	2,43	1,00	8,00	12,00
after treatment	1,82	2,60	0,00	7,00	11,00
<b>Patients 30 &lt;age&lt;45</b>	mean	std. Dev.	min.	max.	N
before treatment	4,14	1,88	1,00	9,00	29,00
after treatment	1,74	2,28	0,00	9,00	27,00
<b>Patients 45 &lt;age</b>	mean	std. Dev.	min.	max.	N
before treatment	3,67	3,20	1,00	10,00	9,00
after treatment	1,88	2,70	0,00	7,00	8,00

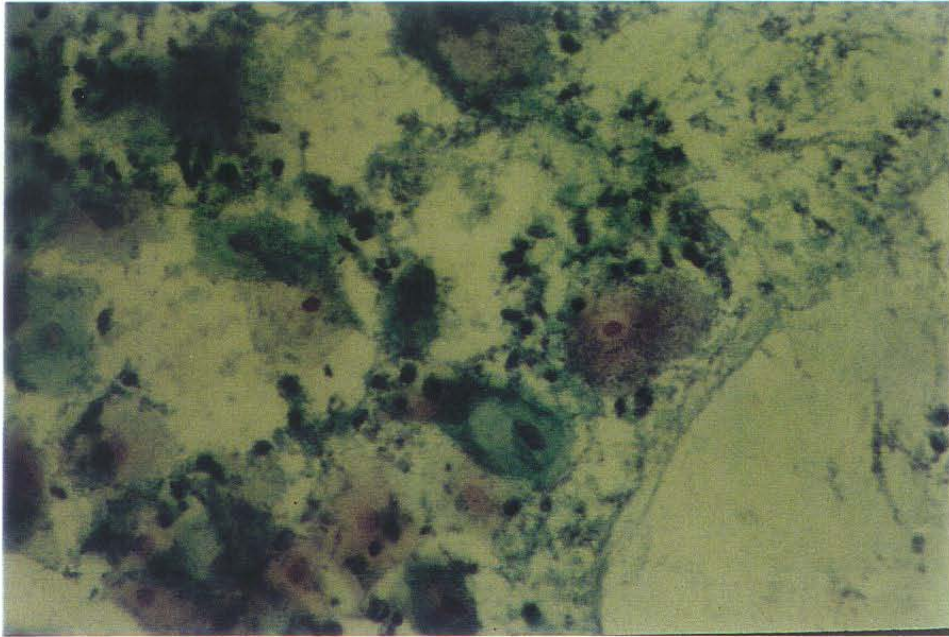
See graphs on the next page.

## Graphs of mean vagina/vulva-scores before and after treatment with Multi-Gyn



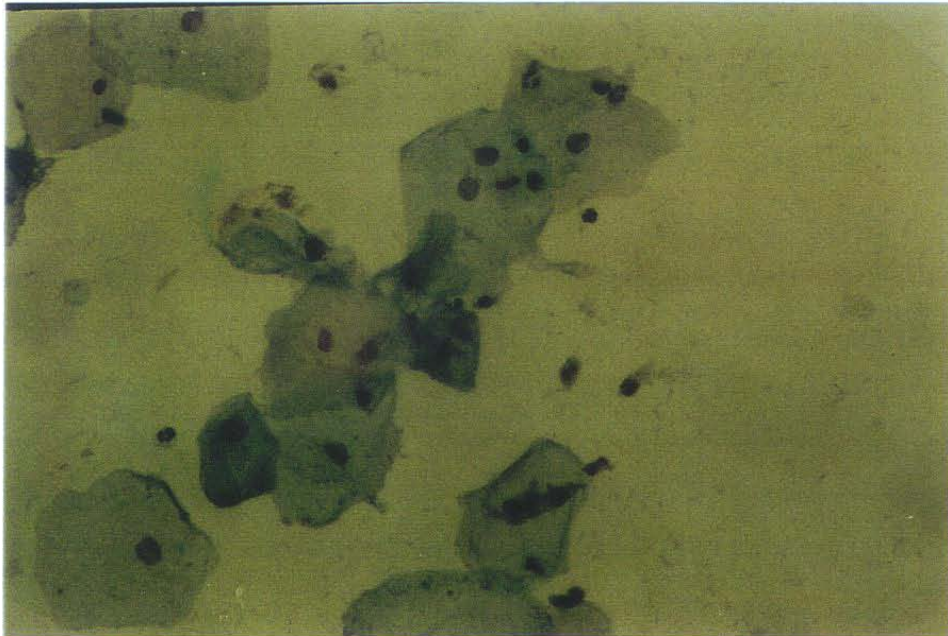
Appendix 2: Images





**Vaginal smear 1: before treatment.**

Complaint: severe itch and discharge  
Smear with coccoid overgrowth and clue cells (bacterial vaginosis)



**Vaginal smear 2: after one week treatment with Multi-Gyn.**

No complaints.  
Normal smear with Döderlein flora.