

"Silent" Abortion and Vaginal Microbiome - Therapy Pathway. Clinical case

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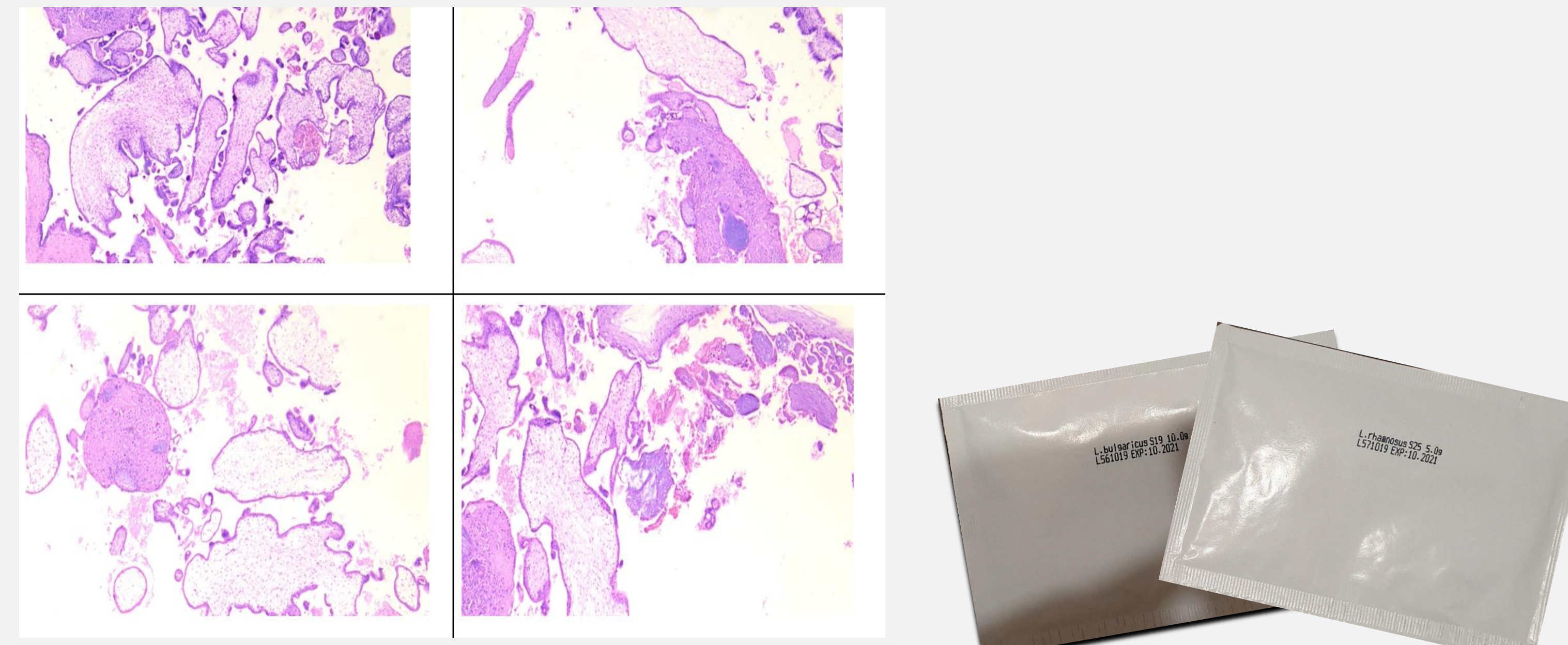
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Introduction

The problem of spontaneous pregnancy termination or miscarriage occupies one of the leading places in obstetric practice. According to statistics, miscarriages occur in 15% of clinically confirmed pregnancies in the general population. New evidence indicates that the reproductive tract microbiome plays an important role in immune responses, both local and general, in the pregnant woman body. During pregnancy, the increased estrogen level contributes to glycogen accumulation in the vaginal epithelium, which, accordingly, supports *Lactobacillus* spp. dominance and stability during pregnancy. Today, although we have a number of recent data that indicate the role of the vaginal and cervical canal microbiome as a predictor of miscarriage.



Histological examination of chorion tissue patient M.

Pharmabiotics

Microorganism name	Enterococcus faecalis	Escherichia coli, lac+	Staphylococcus epidermidis	Lactobacillus acidophilus	Candida guilliermondii
L. plantarum A	Does not inhibit	Does not inhibit	Does not inhibit	Inhibits	Inhibits
L. bulgaricus A6	Does not inhibit	Does not inhibit	Does not inhibit	Inhibits	Does not inhibit
L. rhamnosus S25	Inhibits	Does not inhibit	Does not inhibit	Inhibits	Inhibits
L. bulgaricus A22	Does not inhibit	Does not inhibit	Does not inhibit	Does not inhibit	Inhibits
L. bulgaricus S19	Does not inhibit	Does not inhibit	Inhibits	Does not inhibit	Does not inhibit
L. bulgaricus S6	Does not inhibit	Does not inhibit	Does not inhibit	Does not inhibit	Does not inhibit

Results of pharmabiotics selection for restoration and correction of vaginal microbiota

Discussion

Along with that, the digitized microscopy of native material, the in-depth study of vaginal microbiota state with identification of commensal and opportunistic microorganisms to the species, determination of diagnostic ratio for establishing the disease cause (proven etiological role), as well as accurate (genetic) analysis of vaginal microbiome and metabolomic analysis have been carried out by the Next Generation Sequencing (NGS), followed by the selection of effective pharmabiotics.

The patient has been given the following conclusion: disturbed vaginal microbiocenosis. Complete elimination of bifidobacteria on the background of reduced concentration of *Lactobacillus acidophilus* bacteria, an increased number of *Candida guilliermondii* yeast-like fungi and opportunistic *Staphylococcus epidermidis*. Own lactobacilli do not provide sufficient antagonistic and immune functions due to imbalance.

Conclusions

Today we would like to present a clinical case of a woman with «silent» abortion and microbiome disturbance with subsequent correction of this condition leading to the successful pregnancy and labor result.

30-year-old M. patient addressed to us. During routine screening on 12w 4d of pregnancy, it has been established that the patient had “silent” miscarriage. On the ultrasound examination, no heartbeat of the embryo, the CRL size of the embryo is 9 mm, that corresponds to 6w2 d. At the time of reference and during the previous 12 weeks, the patient had no complaints at all.

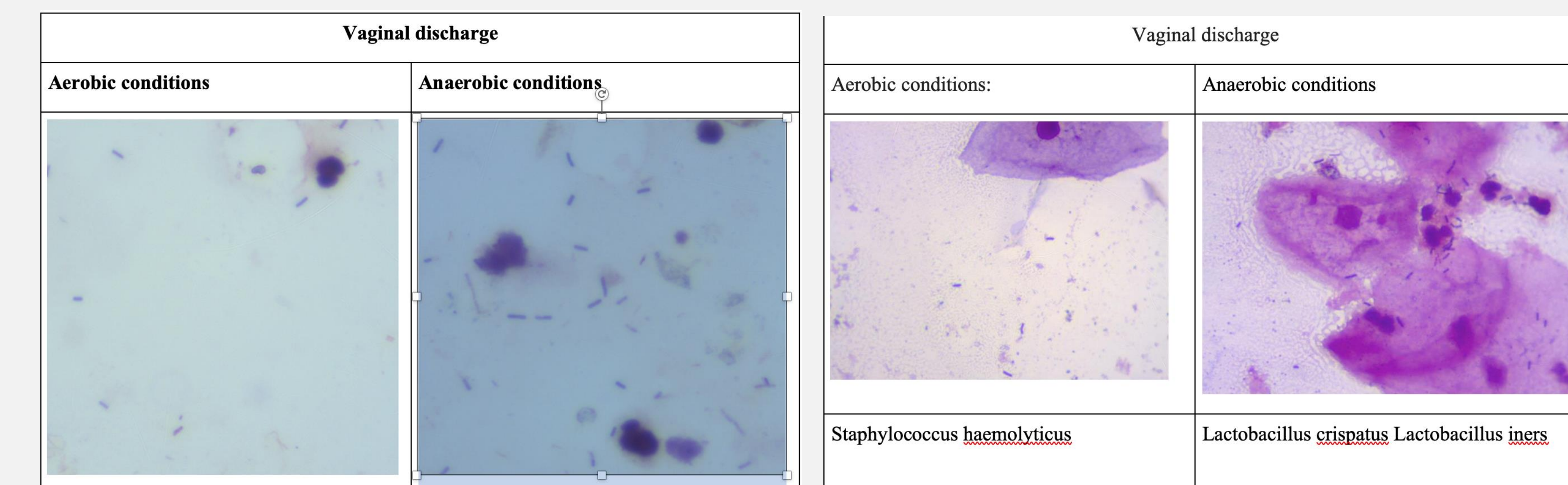
The patient has been offered the combined medication-induced abortion, due to her refusal of wait-and-see tactics.

Abortive material karyotyping: 46 XY, absence of chromosomal abnormalities (normal karyotype).

The following information has been considered very important in the patient's past medical history:

- psychological stress (According to Beck Depression Inventory – 22 points).
- fibrinogen level (5.1 g/l)

The patient underwent thorough examination within the framework of a multidisciplinary approach by obstetrician-gynecologist, endocrinologist, psychologist, microbiologist, immunologist, and nutritionist.



Digitized microscopy from native material (Before treatment)

Digitized microscopy from native material (After treatment)

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