

## **ENDOMETRIOSIS THEORY**

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<http://www.danmartinmd.com/files/coloratlas1990.pdf>

## **INTRODUCTION**

This document focuses on concepts and theories. Concepts and theories are good in offering students and patients a partial understanding of what is happening and may also be reasonable in guiding research direction. However, concepts and theories may result in inappropriate therapy. (Goodwin & Goodwin, JAMA, 251: 2387-2390, 1984)

Therapeutic decisions are based on results. The results do not have to fit a theory. We need to know risks, benefits, costs, acceptability, availability and other associated concerns when using a therapy. We do not have to understand how a therapy works. The results of surgical or medical therapy stand on their therapeutic outcomes, not on an opinion or a theory.

This is not about the effectiveness of excision. Excision was good for many, although not all, of the patients in my practice (DCM), just as they were in Dr. David Redwine's. His surgical concepts are excellent, even if Mulleriosis theories are inadequate. His reoperation rate of 55%, with only 19% having histologic endometriosis, was like mine in the 1980s. (Redwine DB. Fertil Steril, 1991;56, 628-634)

My discussion generally avoids the coagulation vs. excision for surface endometriosis debate. The data is conflicting and either therapy still seems reasonable. I have no data on coagulation for deep endometriosis, but there are published anecdotal pictures of residual endometriosis in cases in which it did not work.

In the later years of my practice, although the recurrent pain rate remained relatively constant, I stopped doing as many repeat laparoscopies. Repeat laparoscopy after excision did not frequently succeed if success for a patient was defined as pain relief lasting more than 6 months. I focused more on talking with them about their questions and concerns, helping them with realistic expectations, considering hormonal suppression, encouraging physical therapy, considering stress therapy, deciding about judicious use of narcotics, and more.

## **INFECTION**

Gazvani et al. (J Endometriosis Pelvic Pain Disorders, 2013;5:2-9) suggested that *C. albicans* may contribute to the pathogenesis of endometriosis by modulating cytokine production.

Kobayashi et al. (Mol Med Rep, 2014; 9, 9-15. doi:10.3892/mmr.2013.1755) concluded that

infection and/or sterile inflammation are involved in endometriosis development. Khan et al. (J Endometriosis Pelvic Pain Disorders 2016;8:2-7) found higher intrauterine microbial colonization with endometriosis. Cicinelli et al. (Fertil Steril 2017; DOI 10.1016/j.fertnstert.2017.05.016) that chronic endometritis may represent a facilitating factor for the development of endometriosis. But, none of clarified why infection did not result in pelvic inflammatory disease.

## **SUBTLE INFLAMMATORY LESIONS**

Additional concern is raised by inflammatory lesions suggestive of endometriosis in adolescents and children. (Marsh and Laufer 2005, Cabana et al. 2010) If these are infectious, then antibiotics can treat active infection and potentially decrease long-term morbidity.

1. If endometriosis is related to infection, then antibiotics may decrease the morbidity of endometriosis
2. If an infection is only coincidental, antibiotics with may:
  - Treat infection
  - Decrease chronic pelvic pain
  - Decrease pelvic inflammatory disease

## **MÜLLERIOSIS, MÜLLERIANOSIS & UNUS PRO OMNIBUS, OMNES PRO UNO.**

Both reflux and Mülleriosis theory are incomplete. Although it is easy to see and understand retrograde menstruation, dispersion and initial attachment, the intricate interactions that control or fail to control persistence, infiltration, and growth are still matters of research. On the other side, congenital, non-midline, Müllerian remnants such as accessory and cavitated uterine masses (Acien et al. Hum Reprod, 2012; 27, 683-694) are non-inflammatory, organoid examples of what is missing from Mülleriosis.

Ron Batt has 8 forms (4 congenital and 4 acquired) of Müllerianosis. (Batt & Yeh, Reprod Sci, 2013;20, 1030-1037) His Endometriosis Foundation of America presentation is at <https://www.endofound.org/video/ronald-batt-md-mullerianosis-embryonic-endometriosis-adenomyosis-endosalpingiosis-and-endocervicosis/1254>

Antonio Lagana's Unus pro omnibus, omnes pro uno includes multiple theories. (Med Hypotheses, 2017; 103:10-20) It is an excellent summary, but does not include infectious theories. Liu (Reprod Sci. 2017 Jan 1:1933719117718275. DOI: 10.1177/1933719117718275. PMID: 28718381) concluded that differences in forms of endometriosis may result from the different lesional microenvironments.

## **TOMATO EFFECT**

The tomato effect in medicine occurs when an efficacious treatment for a certain disease is ignored or rejected because it does not make sense in the light of accepted theories of disease

mechanisms and treatment of these diseases. The tomato effect interferes with the acceptance and use of useful remedies. (Goodwin,& Goodwin, JAMA, 1984;251: 2387-2390)

The only 3 issues that matter in picking a therapy:

- Does it help?
- How toxic is it?
- How much does it cost?

Questions to Ask

- Before we accept a treatment, we should ask "Is this a placebo?"
- Before we reject a treatment, we should ask "Is this a tomato?"