

Candida Albicans: The Hidden Infection

James A. Jackson, Ph.D., BCLD;¹ Hugh D. Riordan, M. D.;²
Ronald Hunninghake, M. D.;² Chris Revard, BS(CLS)²

Patients seen at The Center seldom present with one complaint. The usual patient is chronically ill and has been seen by several physicians without resolution of their problems.

These patients have many major signs and symptoms that present diagnostic challenges to the staff of The Center. Occasionally, some have so many problems, their major complaint is that "they feel bad all over." The protocol used in dealing with these patients include a complete physical, history, and psychological examination. Also included is a comprehensive nutritional evaluation with a food questionnaire and appropriate laboratory testing.¹ If the complaints include fatigue, headache, gas, bloating, diarrhea, depression, memory loss, drowsiness, joint and muscle pain, Candida albicans overgrowth is suspected.

Candida albicans (referred to hereafter as Candida) is a microorganism classified as a fungus, but is commonly referred to as yeast. Unlike plants that need light to survive, fungi thrive in dark, warm and moist environments. Fungi are found in the air, moist, shady soil, fruit, water, and leftover food. It is also present in humans as part of the "normal flora" that co-exist with approximately 300 trillion other microorganisms in the body. Candida may be found in humans shortly after birth and persists throughout life. Approximately 90 percent of all infants at six months of age and about 100 percent of all adults test positive for Candida. It is found in the nose, throat, mouth, genito-urinary system and gastro-intestinal system and generally causes no problems. It is, however, an opportunistic microorganism that will rapidly

proliferate and colonize in many tissues of the body given the slightest opportunity. This overgrowth will occur when the immune system is weakened, or the balance between normal flora and yeast is upset.

Some causes for the overgrowth of Candida is:

1. Widespread use of antibiotics including medications from prescription drugs for chronic infections to consumption of antibiotic-treated foods (meat, dairy, poultry and eggs).
2. High cortisol or other steroid levels from stress, prescription drugs, prolonged illness and malnutrition.
3. High estrogen levels from pregnancy, birth control pills, estrogen replacement therapy and obesity.
4. Diets high in carbohydrates, refined sugar, yeast or yeast products, molds, fermented foods, excessive juices and diabetes.²

If any of the conditions listed above are present, Candida overgrowth, or Candidiasis, may occur. In the yeast form, Candida reproduces by "budding", and at this stage is usually not invasive. However, in the mycelia or fungal stage, it forms long, "root-like" structures that can penetrate the mucus membranes. Candidiasis may occur both in men and women, but is seen more often in women and, generally, with more side effects. As stated above, the signs and symptoms of yeast overgrowth are many and may masquerade as almost any chronic illness. These include yeast vaginitis (itching, burning and discharge), menstrual complaints, prostatitis, impotence, bladder infections, abdominal pain, belching, bloating, heartburn, constipation, diarrhea, rectal itching or irritation, nasal itching, congestion, asthma, headache, earache, "thrush" or oral Candidiasis, severe depression, confusion, extreme irritability and inability to concentrate. As the disease progresses,

1. Professor, Medical Technology Department, Wichita State University, Wichita, KS 67260-0043

2. The Center for the Improvement in Human Functioning Int'l, Inc. 3100 N. Hillside, Wichita, KS 67219

Candidtoxins can be released and may be responsible for the symptoms listed above as well as chronic fatigue.³ It is also thought that yeast overgrowth in the intestine may lead to the "leaky gut" syndrome. In this condition, the lining of the intestine allows large molecules of food to enter the blood and may result in food allergies.⁴

Candidiasis may be confirmed by the presence of the yeast organism in feces or urine, by vaginal or throat swab, or by measuring specific Candida antibodies in the blood. These include anti-Candida antibodies IgG, IgM, and IgA (Candiquest,™ Biomerica, Inc., 1533 Monrovia Ave., Newport Beach, CA 92663). Interpretations of the antibody results are as follows:

Negative-less than	12.5 Units/mL
Equivocal or borderline	12.5 to 25 Units/mL (should be repeated in two weeks)
Positive	26 to 100 Units/mL

Results greater than 100 units indicate a highly elevated amount of antibody. High IgM titers may indicate a current or early onset of the disease, while elevated IgG results may indicate a past, active or prolonged infection, depending on the level of antibody. Elevated IgA may indicate involvement of mucosal surfaces.

The Case

Charts from 50 patients (9 males, 41 females) who had an anti-Candida IgG test performed were randomly selected from our files to check the prevalence of a positive Candida test in relation to the patient's symptoms. Ten patients (20%) had negative titer, ten patients were borderline (20%) while 30 patients (60%) had positive titers. Only two males (4%) had positive titers. Table 1 (p.200) lists ten patients with the highest anti-Candida IgG titers, their diagnoses and other diagnostic tests, where applicable. Since Candida overgrowth can damage the intestinal mucosa leading to food allergies, results from

the cytotoxic food sensitive test is included.^{5,6}

Discussion

The data supports the theory that Candida overgrowth is more common in women, has many symptoms in common, produce anti-Candida antibodies, and may be one of the causes for food allergy or sensitivity. Treatment of Candida overgrowth should be holistic to be effective. Antifungal medications alone may reduce the symptoms but not completely control the disease. Lifestyle changes such as control or restriction of refined sugars and excessive fruit juices and yeast from the diet is required. Botanicals such as grapefruit seed extract or low risk pharmaceuticals (nystatin or lamisil) can be used to kill Candida in the intestine, sinuses or gall bladder. Biotin, as a supplement, will discourage transformation to the invasive myceloid form of Candida. Another effective treatment is the use of "probiotics" to restore balance in the intestinal flora, the most important of which is high quality Lactobacillus acidophilus. For further information about yeast-connected health problems contact your physician.

References

1. Jackson JA, Riordan HD, Fogeron K, Hunninghake R: The nutrition evaluation questionnaire as a diagnostic aid. *J Orthomol Med*, 1998; 13(1): 28-30.
2. Not Well? Could it be Candida? *Health Hunter Newsletter*, 1999; Richard Lewis, editor, 13:2.
3. Crook WG: *The Yeast Connection*. 3rd edition, Jackson, TN, Professional Books, .
4. Peter S: Hidden dangers: an overview of food allergies. *Advance for Physicians Assistants*, 1997; 5(12):46-47.
5. Jackson JA, Riordan HD, Neatherly S, Guinn C: The cytotoxic food sensitivity test - an important diagnostic tool. *J Orthomol Med*, 1995; 10(1): 60-61.
6. Jackson JA, Riordan HD, Neatherly S: Comparison of the food cytotoxic sensitivity test to the RAST/EAST test. *Amer Clin Lab*, 1991; 3:20-21.

Table 1. Correlation of diagnosis, anti-Candida IgG titers and cytotoxic food sensitivity test.

Age/sex	diagnosis	IgG titer (> 26 Units/mL)	Cytotoxic test*					Comments
			+	++	+++	++++		
69/F	Chronic fatigue, allergies vaginitis, loss of memory	72			not done			Intestinal parasite present
62/F	Chronic fatigue, sinusitis	71			not done			
43/F	Insomnia, allergy, headaches hypertension	63		15	10	1	0	Negative to yeast, wheat, sugars
67/F	Arthritis, easy bruising hyperlipidemia	55		20	10	1	0	Sensitive to cane, beet, maple sugar, Brewer/Baker's yeast
52/F	Candidiasis, fibromyalgia sore tongue, thyroid disorders	55		11	6	2	0	Negative to yeast, wheat, sugars
53/F	Arthritis, diabetes, COPD, emphysema	53		17	9	5	0	Sensitive to cane, beet, maple sugars
55/F	Loss of memory, fatigue depression, dry eyes, recurrent Candida	44		17	10	2	0	Negative to yeast, wheat, sugars
57/F	Allergies, arthritis, obesity, hypertension hyperlipidemia	44		18	4	2	0	Negative to yeast, wheat, sugars
53/F	Allergies, fibromyalgia arthritis	42		15	11	2	0	Sensitive to Brewer,/Baker's yeast
44/F	Chronic fatigue, headache easy bruising irritable bowel insomnia	40		18	9	3	0	Negative to yeast, wheat, sugars