

Somato-Psychic Disorders

Robert J. McCaldon, M.D., D.Psych., F.R.C.P.(C)¹

Summary

Somato-psychic Disorders are defined as those physical illnesses which manifest themselves predominately in psychiatric symptomatology. Numerous examples of faulty diagnosis are given. Physicians are urged to avoid making psychiatric diagnoses by mere summary exclusion, to recognize that limitations in the routine examinations may not always reveal the true diagnosis, and to be aware that a vast array of physical disorders can present with psychiatric symptomatology, usually depressive, anxious or pseudo- "functional". Awareness of the Somato-psychic possibility will lead to greater diagnostic precision.

"That every illness causes psychological reactions is a truism to which too little attention is paid."¹

Every physician who has graduated in the past twenty-five years has received extensive exposure to the concepts of psycho-somatic disorders, those physical illnesses which are brought on by psychological tensions, and the list goes from asthma to urticaria, from hypertension to irritable bowel. Even those who suffer myocardial infarctions are often said to have a specific personality type: hard-driving, ambitious, rigid, anxious. The "Type A personality" has become as much a part of our medical vocabulary as "the floppy disc" is in computers.² However, the converse is not so. There is little awareness nor interest by the majority of practitioners in the Somato-Psychic Disorders: those physical or metabolic illnesses which manifest themselves predominately in psychiatric symptomatology.

Three Case Histories

Ophelia, age 47, married, a chronically depressed, anxious lady who often complained of intestinal discomfort, was admitted to hospital for treatment of her

I. 837 Princess St., Kingston, Ontario. Canada K7L 1G8.

worsening depression. While there, an upper and lower GI series were done, despite her family doctor's pronouncement that "she has been belly-aching for years", and "it will be a waste of time". The intestinal cancer which was discovered led to her death within nine months.

Sharon, a 40 year old widow and registered nurse, was anxious and tremulous a great deal, and had conflicts with fellow nurses and supervisors unless they were highly supportive and understanding. Her tremulousness progressed to incoordination and clumsiness. Anxiolytics and antiparkinsonian agents did little to alleviate symptoms. Neurological consultation was arranged. Motor Neuron disease was diagnosed. She died three years later from her disease.

Fred, age 37, married, a factory worker, was referred by his plant physician because he was "depressed". He admitted that he recently fell off a ladder and hit his head. Inappropriate grinning, wearing his hat in the office, and a garish neck-tie were features noted on examination, together with a certain vagueness in thinking. Consultation with his wife revealed that Fred was increasingly forgetful (would leave her standing on street corners because he forgot to pick her up), confused (ten minutes of staring at his socks in the morning before putting them on), and clumsy. Psychological testing revealed a gross organic deficit. At operation, the brain tumor was about the size of a tangerine. Miraculously, Fred survived for several years, though with impaired thinking, dysphasia, and mild hemi-paresis.

Comment

Of course, these cases are serious, dramatic, and the disease in each was progressive so that the correct diagnosis became evident eventually. But mis-diagnosis can be a common problem in disorders presenting as psychiatric.

Koranyi³ has noted that half of the 2,000

patients seen at an out-patient psychiatric clinic had one or several physical illnesses and half of these illnesses were undiagnosed by the referring source. Psychiatrists are wrong to assume that the medically-referred patient has been thoroughly screened for metabolic or physical disorders.

How do we make a diagnosis? Fifty years ago good clinicians believed that 80% of diagnoses could be made from a careful history alone, 10% from a good physical examination, 5% from special laboratory tests, and in 5% of cases, they could not make a diagnosis because they had not progressed far enough to understand everything in medicine. Are these principals to be abandoned? Is this the approach that modern practitioners use? More often, it involves three minutes in the examining room listening to symptoms, a cursory examination of the affected area, a battery of lab tests, and if nothing abnormal shows up, the disorder is listed as "functional" and the patient dismissed as a complainer, a hypochondriac, or "some kind of nut". Once these labels are applied, they tend to stick, and woe betide such a patient who comes down with a hard-to-diagnose physical illness!

A case of lab error: Marilyn was 30, married, thin, anxious and tremulous. She had marital and other interpersonal problems. Laboratory investigation was normal, including the thyroid testing. Psychotherapy was commenced, but her story of heat intolerance, her tremor and "jumpi-ness" and her mild proptosis led the psychiatrist to request repeat thyroid function testing. Of course, she was hyperthyroid. The first testing had been erroneous. Appropriate treatment for her endocrine disorder soon diminished her "Anxiety Neurosis".

What kinds of disorders can be misdiagnosed as psychiatric? The spectrum is wide and the following examples are by no means exhaustive.

Estrogen depletion: Karen, age 48, had a typical agitated depression, successfully treated with a tri-cyclic anti-depressant. However, her symptoms re-occurred over the next two years whenever she was off the drug for more than five weeks. Her 17-beta-estradiol levels were low. Gynecological consultation led to her

being prescribed estrogen followed by progesterogen in cycles. Her depression cleared, never to return again.

Comment: Of course, we have recognized for years that there is often an endocrine basis for menopausal depressions, and hormone replacement remains somewhat controversial and not without its hazards. (If a uterine or breast carcinoma is already present, the hormones make it grow wildly.) Yet in this case, hormone therapy was the obvious treatment of choice. One concludes that it was hormone deficiency which led to the depressive symptomatology, since hormone replacement cured it.

Vitamin B₆ Deficiency: Lois, a young mother of two children, resumed using oral contraceptives once she stopped nursing her youngest child. Within a year, she suffered from fatigue, irritability, depression, epigastric pressure and a "burning sensation" in her abdomen. All investigations were negative, except for the upper GI series which revealed a small hiatus hernia with reflux. The illness was labeled "functional", and the patient became more upset and depressed. It was her gynecologist who suggested appropriate measures to deal with the hiatus hernia (which alleviated the GI symptoms), and extra vitamin B₆ (Pyridoxine) while she was taking oral contraceptives. The fatigue and depression cleared over the next few months.

Comment: Many of the oral contraceptives wash out the B vitamins, especially Pyridoxine. Roughly 30% of patients who seem to get depressed on "the Pill" normalize when given supplements of B₆. In the last five years, gynecologists are using mega-doses of this vitamin to treat Premenstrual Syndrome, recognizing that there may be a link between hormone levels, mood, and this particular nutrient.

Vitamin B₁₂ Deficiency: Moira was 62, a widow, and becoming progressively more agitated, forgetful and depressed. She had been on a variety of psychotropic medications for years. She was becoming unable to care for herself, and was admitted to a psychiatric ward with a tentative diagnosis of early Alzheimer's cerebral degeneration. Psychological testing confirmed an organic dementia. Physical examination

revealed an epigastric scar. "Oh yes, Doctor. Didn't I tell you? I had part of my stomach out for ulcers ten or twelve years ago." Serum B₁₂ level was 182 (normal values are 160 - 620 pico mol/l.). Despite this, the patient was given an injection of 1,000 micrograms of Vitamin B₁₂, and her "Alzheimer's disease" disappeared within 24 hours. Nine years have passed since then. Moira gets a B₁₂ injection every 5 weeks, and folic acid supplementation as well. At age 71, she lives independently, enjoys an active life, and has not been re-admitted to hospital for any reason in that time.

Comment: Folate and B₁₂ deficiencies occur commonly in the hypochlorhydric, i.e. those with too little stomach acid. Post-gastrectomy patients are particularly vulnerable. Although the end-point of such deficiencies is a megaloblastic anemia and, in the case of B₁₂, subacute combined degeneration of the spinal cord, psychiatric symptoms may occur far before these dramatic manifestations, and may resemble a variety of psychiatric conditions: from dementia to depression, from paranoia to anxiety. The lower limits of "normal" as listed by the laboratories are probably too low. Under 200 pico mols/litre for B₁₂, and under 10 nano mols/litre for serum folate are probably low enough to warrant supplementation.

A Prisoner with Pellagra: Maurice is 32, single, a multiple substance abuser, serving time for robbery. He was referred to the prison psychiatric unit with a six-month history of withdrawal, depression and paranoia. He had been eating poorly, and was losing weight. Mentally, he showed depressive mood and psychotic confusion. Testing for the B-vitamins showed deficiencies in almost all of them. With supplementation and an improved diet, his psychosis resolved with no need for ongoing psychotropic medication.

Comment: Niacinamide (B₃) deficiency has been linked to mental symptoms for decades. The Orthomolecular treatment for some forms of schizophrenia proposed by Hoffer (1973) emphasizes high levels of this nutrient to get the brain saturated and correct the essential metabolic defect in such patients.¹⁰ Whether or not one is a "believer" in the megavitamin treatment

of schizophrenia, one should be aware that deficiencies of B-vitamins can masquerade as depression, dementia or schizophrenia. *Pepsi and Paranoia:* Ken is 21, healthy-looking, single. He admitted having extreme jealousy toward his girlfriend, and suspicion that she was "fooling around" while out of town attending school. Past illnesses included peptic ulcer, treated with Cimetidine when he was 14. He suffered from extreme fatigue, and drank "24 Pepsis a day for energy". He also self-medicated with antacids. His diet was poor, and generally devoid of greens. A folic acid deficiency and borderline B₁₂ deficiency were discovered. Changes in his diet and suitable supplementation took away his fatigue. Increased physical fitness followed, and his self-confidence burgeoned. His suspicious possessiveness faded. The psychotherapy necessary to bring this about was brief and simple.

A Depressed Young Lady with T.B.: Helen is a 28 year old single mother of two, referred for "depression". She was a hard-working waitress; took pride in her job. Her complaints included fatigue, forgetfulness and falling hair. Her serum folate was low. Hair mineral analysis showed little except possibly a poor absorption/distribution of minerals. Folate supplementation, however, did little to improve her symptoms. Anxiolytics and anti-depressants were equally ineffective. Her family doctor was contacted, and urged to "have another look". X-rays revealed a lung tumour. It wasn't until this was removed surgically that the correct diagnosis of active tuberculosis was finally made by the pathologist. She is progressing well on anti-tubercular chemotherapy, and does not need psychiatric intervention now.

Lead Poisoning: Abel presented as a personable 31-year old father of three, an ambitious man who owned his own auto repair shop. He was referred for "functional GI disorder". He admitted that his intestinal cramps and diarrhea were worse during the work week, and tended to fade on weekends, "except once when I was stuck in a traffic jam on my way camping with the family". Hair mineral analysis showed very high lead and cadmium levels. Appropriate therapy with chelating agents

and zinc supplementation (which tends to drive out the lead) effected a cure, but not until he installed better ventilation in his shop.

Comment: Lead is still present in the exhaust of many cars, and cadmium is a component of batteries and undercoating. Cutting an undercarriage bolt with a welding torch would easily release toxic cadmium vapours into the air.

Renal Failure Psychosis: Peggy Sue is a nurse, 44, married, with three children. She has been tense for years, and takes Amitriptyline for sleeping, Librax for spastic bowel, and Methyprylon (Noludar) occasionally for severe insomnia. She is characteristically vague, rambling and rather schizoid, but with no true thought disorder. She has worked as a registered nurse throughout her adult life. She became ill with an otitis media, and presented to the Emergency Department on the weekend for help. Her thinking appeared scattered and delusional. She was given an injection of trifluoperazine, which made her worse. She could not be persuaded to enter hospital voluntarily on the psychiatric unit. She insisted that she merely wanted treatment for her ear infection. She went home and called her psychiatrist the next day. Laboratory testing showed a rising blood urea level, and hospital admission on a medical ward was arranged. Once her renal disease was treated, the thought-disorder and delusions faded.

Comment: The patient had a delirium, not a schizophrenic illness.

Alcohol Withdrawal Paranoia: Rita is a married mother of three children, age 43. She complains of her husband's heavy drinking and irresponsible ways. Although she is mildly obese and sometimes looks a trifle puffy about the face, she has never shown signs of alcohol intoxication to doctors, and she denies excessive intake. However, on three occasions when she was admitted to hospital for orthopedic surgery, she has become suspicious and delusional after 48 hours, claiming that the nursing staff were gossiping about her. Since her benzodiazepine medication was maintained in hospital, the most likely explanation for her psychotic symptoms is that of ethanol withdrawal. Fortunately, Haloperidol was

effective in terminating her paranoia.

Epileptic "Nervousness": Edward is a 26 year old married father of one child, a factory worker who spends his spare time in house construction and renovation. He began feeling "jittery" and nervous, and lacked confidence in himself, and this led to psychiatric referral. He was personable and pleasant on examination, though a little vague on conversation. Psychological testing revealed a dull-normal intelligence level, somewhat surprising considering the demands of his job and his abilities in home construction. There were no signs of "organicity". He began complaining of confusion and "black-outs", i.e. amnesic episodes. An EEG showed a temporal lobe abnormality. He is now doing well on anti-convulsant medication.

The Tremor of Tardive Dyskinesia: Mario is a 50 year old bachelor, a man with lifelong shyness, nervousness and a tendency toward alcohol abuse. Over many years, he had been prescribed minor and major tranquilizers, as well as anti-depressants. He was referred for his symptoms of anxiety and tremor. Mario denies alcohol abuse at present. ("I only have two beers at lunch.") The tremor was associated with some instability of his gait. Various benzodiazepines were ineffective (except to reduce his concomitant anxiety). Propa-nolol and Amantidine were tried for his tremor, without significant effect. It was concluded that he has either suffered some permanent cerebellar damage of the Wernicke type, or else he has Tardive Dyskinesia as a late side effect from some of the neuroleptics he took years before. Unfortunately there is little that can be done to reduce his tremulousness. He seems somewhat relieved to know that "it's not all nerves".

Chronic Fatigue Syndrome: Lou is 32, single, homosexual, and has, for the past two years, tested repeatedly negative for the "AIDS" HIV virus. He was referred because he was anxious, depressed and socially withdrawn. Lou presented as personable, conversant, but complaining of chronic fatigue and "inability to function", which led to some social anxiety. He gave a history of repeated upper respiratory illnesses. Psychotherapy and medication with a benzodiazepine did little for him.

Eventually, he was diagnosed as having the Chronic Epstein-Barr Virus syndrome, now called the Chronic Fatigue Syndrome. Mega-doses of Vitamin C and B-Complex were tried by a "holistic practitioner", and his symptoms diminished. An exercise program eventually toned up his body and he was able to reduce the benzodiazepine to occasional night time use.

Panic Disorder: Donna is 27, divorced, childless, and has had social anxiety, nervousness and panic reaction in public since her late teens. The repeated bouts of panic led to social withdrawal and agoraphobia, a situation which was one factor in her marital break-up. Imipramine was prescribed to "put a lid" on the panic, with additional low dose Alprazolam for bad days. Donna progressed somewhat, but remained quite lacking in self confidence, until she embarked on a regular exercise program. This restored self confidence and she came off the medication.

Comment: Although Panic Disorder is a true psychiatric diagnosis, and Agoraphobia a common sequel, one can view the genesis of the panic as purely endocrine, i.e. certain stimuli lead to a massive release of adrenalin and nor-adrenalin into the bloodstream. The agoraphobia then comes from anticipatory anxiety that it might happen again. In Donna's case, there was no diagnostic dilemma, but rather a change in treatment approach based upon the conception of the disorder as Somatopsychic. It was hypothesized that regular aerobic exercise would reduce the adrenal medullary store of catecholamines and lead to more calmness under stress (a phenomenon Dr. Ken Cooper of "Aerobics" fame calls "the attenuated adrenal medullary response").⁴ In addition, aerobic exertion would lead to the specific symptoms of a mild panic attack (increased ventilation, heart rate, blood pressure) but in a natural, physiological way. When the patient saw that she could tolerate this exertion, she began to lose her fear. The exercise could be viewed as systematic de-sensitization and counter-phobic at the same time. Vigorous movement is usually assertive and antithetical to the emotion of anxiety.

A Case of Cardiac Neurosis: Gerhardt is a 39 year old engineer, a married father of

one child, a non-smoker, reasonably athletic, who had attacks "like a mule kicking me in the chest". Repeated examinations and ECG's were normal, and he was referred as having "cardiac neurosis". Unlike true psychosomatic disorders, which give the patient some type of unconscious "gain", his disorder interfered markedly with his enjoyment of life. The psychiatrist insisted on a more extensive investigation. Twenty-four hour Holter monitoring revealed the presence of ventricular extra-systoles. He is doing much better on prescribed Timolol, and self-prescribed marine lipid concentrate.

Comment: This man knew there was something organically wrong, and refused the authoritarian medical wisdom that it was caused by "nerves". Symptoms which prevent a person from doing what he or she really wants to do are more likely to be organic than psychogenic.

Chronic Intestinal Candidiasis: Nora is 56, married, the mother of two children. Despite being a lifelong non-smoker, Nora developed asthma, chronic bronchitis and sinusitis, commencing in childhood. In her adult life, she has had repeated bouts of antibiotic therapy for sinusitis and bronchiectasis. The offending organism was usually H. influenza. Monilia vaginitis was a frequent complication. She complained of forgetfulness, tiredness, constipation, intestinal discomfort (for which she took Metamucil and an antispasmodic) and frequent bouts of weeping. Anti-depressant therapy helped her sleep a bit better, but provided no lasting relief. Eventually, therapy was commenced with Nystatin, yogurt and Lactobacillus each time she had to undergo a course of antibiotics, and for some weeks afterward. Mega-dose, crystalline Vitamin C was added to try to "purge" the inflamed bowel mucus membrane and perhaps enhance her resistance to infection. Although she is not completely free of her symptoms, she is less depressed, less forgetful, and less weepy.

Yeast and the Athlete: Philip is a 35 year old, married father of two, a professional man, hard working and generally healthy. For the past six years he has been a regular exerciser and runner, and has completed several marathons. In late winter he was

put on an antibiotic for an Upper Respiratory Infection. When this failed to clear up, the antibiotic was changed. Eventually, he was prescribed Nystatin for presumed Monilial infection. He took it for only three days, felt better, and resumed his running. Over the next six months, he noticed GI sensitivities to various foods, occasional dizzy spells, and a marked intolerance for alcohol. He credits his running for keeping himself from slipping into a depression. Subscapular pain and a worsening of his dizziness led him to consult a new family doctor, who diagnosed Chronic Intestinal Moniliasis, placed him on a longer course of Nystatin, and cleared up his disorder.

Comment: It has been almost nine years since Orian Truss first published his observation of a connection between Chronic Candidiasis and psychiatric symptomatology,⁵ and William Crook's book, *The Yeast Connection*, is on its way to being a best seller.⁶ Many such cases are extremely difficult to diagnose. Many people take courses of antibiotics, eat too much sugar, take oral contraceptives, and have symptoms of vague GI discomfort, sensitivity to certain foods, depression, emotional lability and forgetfulness. Immunological tests for Candidiasis are still controversial and currently can only be obtained in California. Crook makes his diagnosis mainly on history, and practitioners now have developed a questionnaire which can lead to the diagnosis. It may be one of the "forgotten diagnoses" to which we are going to have to pay much more attention.

Perhaps the recently publicized cases of "Twentieth Century Disease", hypersensitivity to almost everything in the environment,⁷ will turn out to be, not psychiatric as recently suggested, but due to chronic Candidiasis.

The Nurse with Sore Knees: Josee is 26, has just had her third baby in five years. She had to take sick leave from her job at the nursing home early in her last pregnancy, as her knees became progressively more sore. Her doctor diagnosed arthritis, an orthopedic surgeon suggested it was chondromalacia patellae, another physical medicine specialist said she had a leg-length discrepancy and ordered orthotics, a further

consultant opined that she had "Fibrositis, a non-articular arthritis, brought on by stress. It is psychosomatic". She consulted a psychiatrist at the insistence of the insuring agent paying for her disability. She likes her job. Her marriage is good. She loves her children. She lives in the country, gets her water from a hand-dug well, rarely goes in the sun as she is fair and burns easily, takes no supplements regularly as her family physician doesn't believe in them, and her obstetrician didn't mention them. She tends to have big babies. Lab testing revealed a low ESR (making any arthritis an unlikely diagnosis) and a folate deficiency. Mineral supplementation, B-complex and folate supplementation, more sunshine, Vitamin A and D during the winter months gradually resolved her painful knees.

Comment: Her babies sapped her stores of calcium, folate and vitamins. The soft well-water was devoid of minerals. She got little Vitamin D. The diagnosis was a variant of rickets, not a "psychosomatic disease".

Discussion

These observations are offered not to prove my own diagnostic superiority, nor do I offer the treatments in each case as the latest word in therapeutics. However, it is axiomatic in medicine that you'll not likely diagnose a problem unless you are aware of its existence.

Over a quarter of a century ago, Mayer-Gross et al published these words: "If all the psychological complications of physical illness were to be included in a description of the clinical picture, the variety of symptoms would be almost endless ... the most significant is ... clouding of consciousness."⁸

It is evident that a wide variety of physical disorders can manifest themselves predominately in psychiatric symptomatology. To treat such disorders with purely psychiatric methods makes about as much sense as treating tuberculosis with A.S.A. The most effective treatment for any illness is that specific to the cause of that illness. Admittedly, many illnesses are complex and the correct diagnosis does not necessarily leap out at us at first glance.

May I make a plea here: a plea that we

return to some traditional values. Let us begin by taking a careful history, listening to the patient. Let us then do a reasonable physical examination. Then let us select any specialized tests with care, recognizing their limitations. And if the diagnosis does not appear clearly to us, let us have the humility to keep an open mind before dismissing the disorder as "functional" and the patient as "psychosomatic". There is little more frustrating to a patient than to be convinced he or she is physically sick, and to be told that the problem is purely neurotic. Seminars and articles on the "Difficult Patient" often instruct physicians to do the routine examinations, and if nothing pathological is evident, be firm with the patient and refuse any further investigation or referral.⁹ Never have I heard the realistically humble advice to examine your own investigation and see if it might be lacking or faulty. Yet ten years ago, who had heard of Legionnaire's Disease, AIDS, Chronic Candidiasis, Chronic Fatigue Syndrome?

One does not make a psychiatric diagnosis by mere exclusion of physical or metabolic factors. Psychiatric illnesses have their own constellation of symptoms and signs. When you come to that 5% of patients where the diagnosis is not obvious, do have the humility to admit that there may still be a gap in your own knowledge or technique.

A rough rule of thumb seems to be to ask which came first, the unhappy emotional conflict, or the symptom complex. In psychosomatic illness, the conflict appears first, in somato-psychic, the complex arises first and then there is an unhappy patient. Physicians should never assume that a patient has been well-screened for physical disease. One must enquire as to the extent of the functional enquiry, the scope of the physical examination, what lab tests were

ordered, and what were the results. If there are gaps in any of these, the careful clinician will see to it that they are properly done.

Of course, psycho-somatic disorders do exist, as does true hypochondriasis, as does neurosis. The astute physician will recognize that Somato-psychic disorders also exist, and will be on guard for them.

References

1. Curran D and Partidge M: *Psychological Medicine*; E. & W. Livingstone Ltd., Edinburgh & London; 1957 p. 322.
2. Friedman M and Rosenman RH: *Type A Behaviour and Your Heart*; Ballantine Books N.Y.; 1974.
3. Koranyi EK: Morbidity and Rate of Undiagnosed Physical Illnesses in a Psychiatric Clinic Population; *Arch. Gen. Psychiatry*, Vol. 36, April 1979; pp. 414-419.
4. Cooper KH: *The New Aerobics*; M. Evans & Co., N.Y.; 1970; p. 126.
5. Truss CO: Tissue Injury Induced by C. Albicans: Mental and Neurological Manifestations; *Orthomolecular Psychiatry* Vol. 7; 1978; pp. 17-37.
6. Crook WG: *The Yeast Connection — A Medical Breakthrough*; Random House N.Y.; 1983.
7. Stewart DE, Raskin J: Psychiatric Assessment of Patients with "20th Century Disease" ("Total Allergy Syndrome"); *Can. Med. Assoc. J.*; 1985; pp. 1001-1006.
8. Mayer-Gross W, Slater E, Roth M: *Clinical Psychiatry*; Cassell & Co.; London 1960; p. 308.
9. Lipowski ZJ: Somatization: a borderland between medicine and psychiatry; *Can. Med. Assoc. J.*; Sept. 15, 1986; Vol. 135, No. 6 pp. 609-614.
10. Hoffer A: Mechanism of action of nicotinic acid and nicotinamide in the treatment of schizophrenia. In: *Orthomolecular Psychiatry*, D. Hawkins & L. Pauling, Eds., W.H. Freeman & Co., New York, 1973.