

Hypothesizing concomitant types A and D personalities in chronic kidney disease

Abstract

Humanized medical assistance is crucial to the treatment of all patients as well as an individualized psychological diagnosis and intervention. Type D personality has been described as a common trait in Chronic Kidney Disease. Considering these patients cardiovascular disease risk and occurrence health professionals must remember to find out if there are traits or characteristics of type A personality. In short type D individuals are those who bottle up their emotions and tend to look at the negative side of facts, having features that resemble hostile type A. Type A personality gathers more ambitious, competitive and aggressive behavior. Details as to data on type A personality and evidences of association with cardiovascular risk must be understood from experimental, clinical and epidemiological views so as to enhance all possible efforts for humanized care together with psychological guidance. Anger as a predisposition to hypertension has been mentioned in several studies, among them, patients who underwent the anger tests, expressed at home and at work, showed a tendency to this condition. The simple test to correct the anger content can be done by taking blood pressure, pulse and dosing plasma catecholamines before and after the mathematical calculus test.

Keywords: type A personality, type D personality, chronic kidney disease, cardiovascular, psychotherapy, humanized medicine, laboratory markers

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Introduction

Although Type D Personality has been associated with Chronic Kidney Disease it is important to be emphasized that the high proportion of this group of patients are cardiovascular disease prone and in most cases develop Coronary Artery Disease, which is linked more classically with Type A Personality. Just so that the different types from A to D, they are summarily defined:

Type A: those who are ambitious, typically aggressive and competitive.

Type B: those who are laid-back, carefree and slightly too casual with things.

Type C: those who are thoughtful, systematic and sensitive to others.

Type D: those who bottle up their emotions and tend to look on the negative side of things quite a bit.

Even so it is worthy to review all the characterizes of the classical Type A for new considerations as to its concomitance with Type D.

In constitutional stress prevails, given the burden of the agent that produces stress, a special factor, of ego fragility, being related to genetics, especially with the so-called body constitution; profile A, named by Friedman, Rosenmann and Friedman et al.^{1,2} with more characteristics:

Features of profile A

- I. Marked tendency to achieve usually undefined goals
- II. Marked drive to compete
- III. Persistent desire for recognition and progress
- IV. Continuously involved in multiple functions, not having time

to finish them, getting hurt and distressing at the last moment to perform them

- V. Propensity to accelerate the pace of physical and mental activities
- VI. Extraordinarily concerned, physically and mentally
- VII. Another anxious characteristic of these individuals is their inability to relax, that is, these individuals are never satisfied with what they accomplish, because their degree of ambition is always above what they get.

These authors studied in 125 “executive” women without heart disease, but with profile A, and in 132 women with profile B (40 to 55 years), a total of 257 women (including 39 nuns), cholesterolemia, blood coagulation, incidence of senile arch and radiographic studies of coronary arteries. Group A showed a marked increase in cholesterol, faster blood coagulation, three to five times more diastolic hypertension and four times more incidence of coronary arteriopathy, including myocardial infarction, compared to type B group. Scherwitz et al.³ students with type A and type B profile were selected by a battery of tests including cold test, mental arithmetic calculus, interview about behavior and blood pressure, pulse and digital vasoconstriction, correlating them with distress, performance, voice characteristics, emotional intensity and self-reference (emotions during interviews).

The greatest difference between the two types of behavior was presented in the self-references and in the type of pronouncement of the words. Type A showed increased systolic and diastolic hypertension, low heart rate, high anxiety in cold tests, greater emphasis on voice and greater emotional involvement. Type B showed little self-reference relationship to any measure taken. Also, type A showed a more pronounced increase in norepinephrine, epinephrine and faster coagulation. Friedman et al.² also studied three groups of men (groups

A, B, C). Group A of 83 individuals with intense desire for achievement, great competitions and dead-lives, whose frequency of senile arch, cholesterolemia and incidence of coronary arteriopathies were high; group B with 83 individuals with the opposite temperament; group C with 46 insecure and ambitious individuals. They found that coronary heart disease was 7 times more frequent in group A individuals and concluded that profile A seems to be the most important of coronary risk factors. The introduction by Rosenmann et al.⁴ type A concept has initiated one of the most prominent and controversial psychosomatic studies of coronary arteriopathy in recent decades.⁵⁻⁸

Retrospective studies on profile A and coronary arteriopathies indicate a real and evident link between these two pathological situations.⁹ One of the epidemiological studies on this correlation was conducted by the Western Collaborative Group Study (WCGS)⁴ involving 3000 normal men for 8 and a half years revealing twice the risk of acquiring coronary atherosclerosis to those with profile A, confirmed by the Framingham Studies of Coronary Risk,¹⁰ whose research also shows women with profile A reaching the same incidence as men. Byrne, Rosenmann¹¹ think steam-type A patients behave unintentionally, increasing their occupational and social stress.

In our experience, coronary disease patients cannot avoid marital and family stress, unless after years of analytical psychotherapy.¹² Theorell, Rahe¹³ Scherwitz et al.¹⁴ and Tennant et al.¹⁵ have the same opinion although studied by psychological and non-psychoanalytic methods. In 95 wives, the Framingham Type A Scale and Jenkins Activity Survey were applied and verified that type A of women suffered a higher state of stress and with worse marital adjustment than those of type B.¹⁶ Anger as a predisposition to hypertension has been mentioned in several studies, among them, 45 non-medicated hypertensive patients who underwent the anger tests, expressed at home and at work, showed a tendency to hypertension.¹⁷

The simple test to correct the anger content can be done by taking blood pressure, pulse and dosing plasma catecholamines before and after the mathematical calculus test.¹⁸ Steptoe¹⁹ also confirms the importance of catecholamine dosage in stress by arousal stress of the sympathetic. Seeman, Syme²⁰ studying 119 "white collar workers" by angiography, found that the individual feeling loved was more important in preventing coronary atherosclerosis than other factors already known (hypertension, smoking, cholesterolemia, etc.). The state of satisfaction, happiness, tends to normalize blood pressure, especially systolic (in patients with blood pressure lability) while anger and anxiety tend to increase it, especially diastolic.²¹ Paiva²² researched the biochemical profile in 25 coronary disease patients (myocardial infarction), patients with behavior A, encountering family and social stress (71%), smoking (81%), increased glycemic curve (35%), hypertension (9.0%), uric acid (70%), HDL below 35 (53%), LDL above 150 (62%), cholesterol above 250 mg (53%), triglycerides above 200 mg (30%), risk index 1 more than 4.97 (81%) and risk 2 above 3.55 (67%).

Paiva²² evidenced that in coronary atherosclerosis there are anxious, tense, worried and angry individuals, sensitive to rejections (in love, work and especially in the family), especially ignominies. They live in excessive work, sedentary and tense, besides suffering from tanatism (unconscious self-destruction, assaulting to be assaulted), using manic defenses of denial in relation to childhood conflicts (in the mold periods). Marital and family conflict is the most serious for the risk index. It has been shown in research through assessment tests for anxious stress states, determination of type A personality and speech therapy tests to assess verbal behavior in dyslipemic patients with obstructive coronary arteriopathy and

without evidence of obstructive coronary arteriopathy and concluded that there was a more evident correlation between stress and non-coronary arteriopathic patients, and it is important to highlight that extreme anxiety was found in non-coronary arteriopathic patients with hypercholesterolemia and hypertriglyceridemia (800 +/- 100 mg/dl). Fifty-eight patients were studied, and the chi-square test was applied, not proving significant ($X^2=0.77$), but verified that there was a correlation between greater competitiveness (hostility) in males, as well as hostility and cholesterolemia in both men and women (more common when cases were type A).

In the 30 patients studied by Paiva²³ (15 Profile A and 15 Profile B), through the articulation of the word, intensity, resonance, height, extension, speed and rhythm of the voice, in addition to breathing, observed by statistical analysis all these parameters correlated with profile A, which 53% demonstrated by high vocal speed and rhythm, which are tense individuals and who express willingness to omit speech data. With all the above considerations one must make the best efforts to characterize concomitant types of personality in each of the chronic kidney patient so as to be given the personalized psychological assistance and improve humanized quality of care living.

Acknowledgments

In memoriam Luiz Miller de Paiva.

Conflicts of interest

No conflict of interest.

References

1. Friedman M, Rosenman RH. Association of specific overt behavior pattern with blood and cardiovascular findings: blood cholesterol level, blood clotting time, incidence of arcus senilis, and clinical coronary artery disease. *JAMA*. 1959;169(12):1286-1296.
2. Friedman M, Byers SO, Roseman RH, et al. Coronary-prone individuals (type A behavior pattern): some biochemical characteristics. *JAMA*. 1970;212(6):1030-1037.
3. Scherwitz L, Berton K, Leventhal H. Type A behavior, self-involvement, and cardiovascular response. *Psychosom Med*. 1978;40(8):593-609.
4. Rosenman RH, Brand RJ, Jenkins D, et al. Coronary heart disease in Western Collaborative Group Study. Final follow-up experience of 8 1/2 years. *JAMA*. 1975;233(8): 872-877.
5. Son YJ, You MA, Song EK. Influence of Type D personality on health-related quality of life among Korean patients with end-stage renal disease. *Int J Nurs Pract*. 2012;18(3):260-267.
6. Lin IM, Weng CY, Lin TK, et al. The relationship between expressive/suppressive hostility behavior and cardiac autonomic activations in patients with coronary artery disease. *Acta Cardiol Sin*. 2015;31(4):308-316.
7. Steenblock C, Todorov V, Kanczkowski W, et al. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the neuroendocrine stress axis. *Mol Psychiatry*. 2020;25(8):1611-1617.
8. Moccia F, Gerbino A, Lionetti V, et al. Covid-19-associated cardiovascular morbidity in older adults: a position paper from the Italian Society of Cardiovascular Researches. *GeroScience*. 2020;42(4):1021-1049.
9. Byrne DG. Personal determinants of life event stress and myocardial infarction. *Psychother Psychosom*. 1983;40(1-4):106-114.
10. Haynes SG, Feinleib M, Levine S, et al. The relationship of psychosocial factors to coronary heart disease in the Framingham study. II. Prevalence of coronary heart disease. *Am J Epidemiol*. 1978;107(5):384-402.

11. Byrne DG, Rosenman RH. The type A behaviour pattern as a precursor to stressful life-events: a confluence of coronary risks. *Br J Med Psychol*. 1986;59(Pt 1):75–82.
12. Miller de Paiva L. *Psychosomatic Psychiatry*. São Paulo: Garatuja; 1990.
13. Theorell T, Rahe RH. Psychosocial factors and myocardial infarction. I. An inpatient study in Sweden. *J Psychosom Res*. 1971;15(1):25–31.
14. Scherwitz L, McKelvain R, Laman C, et al. Type A behavior, self-involvement, and coronary atherosclerosis. *Psychosom Med*. 1983;45(1):47–57.
15. Tennant C, Langeluddecke P, Byrne D. The concept of stress. *Aust N Z J Psychiatry*. 1985;19(2):113–118.
16. Houston BK, Kelly KE. Type A behavior in housewives: relation to work, marital adjustment, stress, tension, health, fear-of-failure and self esteem. *J Psychosom Res*. 1987;31(1):55–61.
17. Melamed S. Emotional reactivity and elevated blood pressure. *Psychosom Med*. 1987;49(3):217–225.
18. Schneider RH, Julius S, Karunas R. Ambulatory blood pressure monitoring and laboratory reactivity in type A behavior and components. *Psychosom Med*. 1989;51(3):290–305.
19. Steptoe A. The assessment of sympathetic nervous function in human stress research. *J Psychosom Res*. 1987;31(2):141–152.
20. Seeman TE, Syme SL. Social networks and coronary artery disease: a comparison of the structure and function of social relations as predictors of disease. *Psychosom Med*. 1987;49(4):341–354.
21. James GD, Yee LS, Harshfield GA, et al. The influence of happiness, anger, and anxiety on the blood pressure of borderline hypertensives. *Psychosom Med*. 1986;48(7):502–508.
22. Paiva AM. Stress, comportamento do tipo A e modelo bioquímico na aterosclerose coronária; parte II / Stress, behavior of type A and biochemical propile in coronary arteriosclerosis; part II. *Ars Cvrandi cardiol*. 1983;5(34):23–36.
23. Miller de Paiva L. Ansiedade - enfoque terapêutico [Anxiety - therapeutic approach]. *Ars Cvrandi*. 1983;16(5):85–96.