Letter to Editor

Saint’s Triad

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ABBREVIATIONS

ST: Saint’s triad; COPD: Chronic Obstructive Pulmonary Disease; YNS: Yellow Nail Syndrome; MMP: Matrix Metalloproteinase.

LETTER TO EDITOR

The classical Saint’s triad (ST) was first described in the 1940s including hiatus hernia, colonic diverticulosis and cholelithiasis [1-6]. Since then, this condition has been scarcely reported in patients with other changes like cholecystitis, gallbladder anomaly, hydropic gallbladder, inguinal and other intestinal hernias, and diverticula of small intestine [1-6]. There is no consensus about the exact mechanisms to explain their causal relationship. Diverse hypotheses have been proposed, but enough scientific bases seem to be lacking. Brazilian authors described a case of ST in comitance with yellow nail syndrome (YNS), and the old patient had Phrygian cap gallbladder, a congenital anomaly [5]. YNS is related to malignancy, renal failure, thyroid disease, lupus, rheumatoid arthritis, tuberculosis, AIDS, hypoalbuminemia, hypogammaglobulinemia, and drug effects [5]. Hauer-Jensen et al., focused “Herniosis” as a common etiology for the ST. This systemic connective tissue disorder would play a main role in association with risk factors like diabetes mellitus, aging, COPD, hypertension and aortic aneurysm [2]. Furthermore, some authors have hypothesized causal relationships between the syndrome and cardiovascular changes, in special with aortic aneurysm/soldated cardiomyopathy [3,4]. Antoniou et al. (2011), reviewed the literature data from clinical and genetic studies about associations between abdominal hernias and aortic aneurysms [7]. The authors found evidence of common pathology shared by hernias and aneurysms [7]. They highlighted an increased proteolytic activity and disordered activity of MMP-2 in cases of stress incontinence and coexistent abdominal primary hernias and aortic aneurysms [8]. Elevated levels of MMP-2 significantly increase the degradation of collagen and elastic fibers; important phenomenon observed in defects of multiple organ connective tissue [8]. MMP-2 act on tumors, cardiovascular diseases, and diabetes complications; substrates are collagen I, IV, V, VII, X, XI, XIV, gelatin, fibronectin, laminin,aggrecan, and casein [8]. Worthy of note, in addition to inguinal hernia and abdominal aortic aneurysm, is the disordered activity of MMP-2 in cases of stress incontinence and colonic diverticula [8]. Therefore, the aforementioned works may support the proteolytic etiopathogenic theory for the ST. If one accepts the common physiopathology involving ST and dilated cardiomyopathy, echocardiography should be part of routine evaluation of patients with the syndrome [3].

REFERENCES
