Secondary pelvic congestion syndrome: Description and radiologic diagnosis

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Introduction and objective: Pelvic Congestion Syndrome (PCS) is an often under- and misdiagnosed condition of the pelvic venous system leading to nonspecific pelvic pain that was initially described in females alone. Primary aim was to describe our findings of secondary PCS as a distinct entity from primary PCS in that it has an identifiable vascular etiology and is gender nonspecific. It was also aimed to assess the adequacy and reliability of late-arterial phase CT Urography (CTU) as the initial imaging modality in diagnosing and evaluating secondary PCS.

Methods: 59 Patients with PCS, 36 males and 23 females ages 24 to 63, from 2000-2011 were retrospectively reviewed. To maximize opacification, CTU images were taken in the late-arterial phase with a 35-50 second delay after contrast administration.

Results: Review of our cases revealed multiple etiologies for PCS, including: Nutcracker syndrome (19 cases), cirrhosis (17), retroaortic left renal vein (11), tumor thrombosis of the IVC (5), portal vein thrombosis (4), renal cell carcinoma with left renal vein thrombosis (2), and left kidney AVF (1). The most common symptom was unexplained chronic pelvic pain. The patients in our series had clearly identifiable vascular flow abnormalities leading to the development of PCS, and were therefore diagnosed as having Secondary PCS. All cases were easily identified utilizing CTU to visualize and measure dilation of the left gonadal vein and pelvic varices. This modality also proved valuable in the identification and management of the various underlying causes of Secondary PCS.

Conclusions: Secondary PCS is distinct from Primary PCS in that it arises from clearly identifiable vascular flow abnormalities and occurs in both males and females. The diverse set of underlying etiologies, as well as the resulting congested varices, can be reliably and adequately visualized using CTU as the initial imaging modality.

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