

Movement of the Pancreas Associated with Change of Posture

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Because of its deep retroperitoneal location, the pancreas and swellings arising from it have been considered to be immobile during respiration as well as during change of posture [1, 2]. However, we, as well as other authors worldwide, have demonstrated that the traditional belief of the immobility of the pancreas during respiration is not true and, indeed, the pancreas moves during respiration [3, 4, 5, 6]. The phenomenon of the movement of the pancreas when changing posture has also been reported earlier [7]. We were intrigued with the marked mobility of the pancreas which was encountered during change of posture in a 25-year-old female patient with idiopathic chronic calcific pancreatitis.

This 25-year-old female presented to us with acute abdominal pain of 24-hour duration. As a part of the diagnostic evaluation, abdominal

skiagrams were performed both in the erect and the supine position which showed dense pancreatic calcification. This pancreatic calcification demonstrated marked movement during change of posture from the supine to the erect position. Once the patient recovered from an acute episode of abdominal pain, the skiagrams of the abdomen were repeated in both erect and supine positions, with the patient holding her breath in mid-expiration, to confirm the movement of the pancreas during change of posture. The skiagrams were performed after repeated rehearsals of breath holding in the same phase of respiration (mid-expiration) to negate the effect of respiration on the movement of the pancreas. The abdominal skiagram in the supine position showed dense calcification throughout the pancreas (Image 1). The abdominal skiagram in the erect position (Image 2) showed a



Image 1.

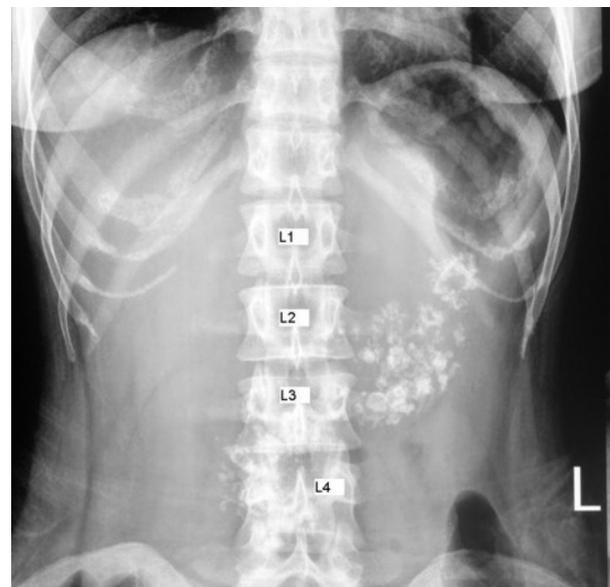


Image 2.

marked downward as well as a medial movement of the pancreas during change of posture from the supine to the erect position. This phenomenon of movement of the pancreas during respiration as well as during change of posture dispels the traditional belief that the pancreas, being a retroperitoneal organ, is fixed and does not move either during respiration or during change of posture. This may have important implications for imaging, and guided diagnostic and therapeutic minimally invasive interventions such as focusing on pancreatic duct stones during treatment with extracorporeal shockwave lithotripsy (ESWL) as well as accurate placement of the needle during percutaneous fine needle aspiration biopsy and other minimally invasive interventions.

Received February 24th, 2007 - Accepted March 29th, 2007

Keywords Cholangiopancreatography, Endoscopic Retrograde; Lithotripsy; Pancreatic Pseudocyst; Pancreatitis; Tomography, X-Ray Computed

Conflict of interest The authors have no potential conflicts of interest

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Document URL: <http://www.joplink.net/prev/200707/03.html>

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