Pancreatitis; not always about alcohol or gallstones

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A commonly diagnosed condition such as Pancreatitis with well-known causes becomes a diagnostic challenge when no clear etiology can be determined. The following case explores the possible link between Mast Cell Activation Disorder/Syndrome (MCAS) and pancreatitis. A 35 year old female who carries the rare diagnosis of MCAS was presented for an elective ventral hernia repair. The surgery itself was uneventful, however on POD 1 patient developed sudden onset of severe epigastric abdominal pain. CT abdomen was obtained with findings suspicious for possible pancreatitis. The CT findings prompted a check of this patient’s lipase. Lipase was found to be markedly elevated at 4674. Common causes of pancreatitis such as gallstones, alcohol and medication-induced were explored but the etiology was unable to be determined. Keeping this patient’s unique background history in mind, the pancreatitis was attributed to her MCAS. Patient was treated with IVF and bowel rest and fortunately recovered from her acute bout of pancreatitis rather quickly. First described in 1991 but not termed until the late 2000’s ‘mast cell activation syndrome’ is a collection of illnesses precipitated by mast cells (MC) which inappropriately activate inflammatory mediators. The illness is systemic and can affect almost any organ including the pancreas. Patients afflicted by this mysterious condition experience episodes labeled mast cell flare ups. The presentation of a flare can mimic symptoms of anaphylaxis in some cases. The precipitating factors are numerous but can be as simple as the application of a topical substance such as lotion or perfume. The treatment of this rare disorder is still being studied however current therapy is aimed at controlling and ameliorating the disease by inhibiting the release and blocking the effects of the released mediators by MC. Trigger avoidance also plays a key role. The diagnosis of MCAS involves is suspected with a rise in tryptase levels. Tryptase is the most abundant mediator store in Mast cells. Bone marrow aspiration may reveal MC abnormalities like spindling and small clustering of two or three cells. Over the course of understanding MC mediators, we now acknowledge their involvement in maintaining homeostasis of many body's tissues and organ systems. Hence it's not surprising to learn these mediators can have an effect not just at a cellular level but at a clinical level too. In this case the inflammation of the pancreas could be explained by MCAS. In more recent years the link between activation of mast cells and the development of acute pancreatitis has been appreciated. One study suggests that release of MC mediators pose inflammation and enzymatic assault to the organ. Increased circulating histamine levels have also been associated which worsens organ injury more so if derived from pancreatic MC.

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