Case report - Key learning points:
Several case reports have described patients who developed type 1 diabetes mellitus (DM) after acute hepatitis C infection. The prevalence of hepatitis C in the non-diabetic population is lower (1.4%) compared to the diabetic population (21.3%). A case report describes a patient who developed type 1 DM after acute hepatitis C infection. The patient was diagnosed with hepatitis C in the 1990s, at the age of 35. She was found to be positive for hepatitis C in 2000 during a surgical procedure for removal of a breast mass. She remained asymptomatic until 2006, when she presented with diabetes mellitus. She was diagnosed with type 1 DM in 2007 at the age of 55. Her diabetes was characterized by hyperglycaemia, polyuria, polydypsia, and weight loss. She was treated with insulin and other medications, and her diabetes was controlled with good metabolic parameters. The case report highlights the potential link between acute hepatitis C infection and the development of type 1 DM.

Case report - Introduction:
Type 1 DM is a chronic autoimmune disease that primarily affects the exocrine glands, including the pancreas. It is characterized by the destruction of insulin-producing beta cells in the pancreas, leading to hyperglycaemia and the development of insulin-dependent diabetes. The incidence of type 1 DM in the general population is approximately 10 per 100,000 person-years. In the UK, the prevalence of type 1 DM is estimated to be about 7 per 100,000 person-years. The disease is more common in females, with a female-to-male ratio of 9:1. The mean age of onset is around the 4th to 5th decade of life.

Case report - Discussion:
Type 1 DM is a chronic autoimmune disease that primarily affects the exocrine glands, including the pancreas. It is characterized by the destruction of insulin-producing beta cells in the pancreas, leading to hyperglycaemia and the development of insulin-dependent diabetes. The incidence of type 1 DM in the general population is approximately 10 per 100,000 person-years. In the UK, the prevalence of type 1 DM is estimated to be about 7 per 100,000 person-years. The disease is more common in females, with a female-to-male ratio of 9:1. The mean age of onset is around the 4th to 5th decade of life.

Signs of an autonomic nervous system dysfunction involving the gastrointestinal and urinary systems can be observed in the majority of type 1 DM patients. However, this high occurrence is rarely associated with clinically significant symptoms, according to one study. Nevertheless, another study of 38 patients with type 1 DM, demonstrated a higher prevalence of self-reported symptoms of autonomic parasympathetic dysfunction, such as urinary disorder, and gastroparesis (females only) in comparison to controls.

Our patient’s presentation was unusual due to the early age of onset as well as the fact that it was the swallowing problems that triggered autonomic investigations. She did not report classic sicca symptoms initially, therefore the index of suspicion of underlying primary Sjögren’s syndrome was low. The most prominent clinical symptom was abdominal pain and bloating as well as a feeling of fullness after meals. Her immunology screen was not typical of Sjögren’s syndrome with negative anti-Ro and anti-La antibodies, negative rheumatoid factor, and normal CRP. The patient does not meet ACR criteria for diagnosis of Sjögren’s syndrome, as there is no tissue diagnosis and lacrimation and salivary tests have not been performed yet. However, the presentation with gastroparesis, sicca symptoms, microcystic changes in salivary glands and raised ESR are highly suggestive of primary Sjögren’s syndrome.

Case report - Key learning points:
Rarity of pSS and consequently small numbers of patients recruited in the studies of abdominal disorders in pSS make data interpretation difficult.

Symptoms arise from impaired function of exocrine glands located across the entire gastrointestinal system. The autonomic nervous system (ANS) may also be involved in the disease manifested by various autonomic dysfunction (AD) symptoms. In pSS, the degree of ANS dysfunction appears to be determined by the extent of inflammation in the salivary glands and the severity of extrinsic compression (fibrosis). There is also evidence that patients with pSS have antibodies against muscarinic receptors located in vascular smooth muscle cells, particularly in gastrointestinal and genitourinary systems as well as exocrine glands.

Gastroparesis is perhaps better known in association with diabetes, with a prevalence between 30% and 50%. However, in one study involving 28 patients with pSS 43% of patients showed signs of impaired gastric emptying, while 29% fulfilled the criteria for gastroparesis. Given the early age and childbearing potential of the patient treatment options are limited. There are reports of successful use of intravenous immunoglobulin in patients with pSS which was shown to neutralize anti-muscarinic M3 receptor antibodies and may improve symptoms of autonomic dysregulation.

Case report - Discussion:
Type 1 DM is a chronic autoimmune disease that primarily affects the exocrine glands, including the pancreas. It is characterized by the destruction of insulin-producing beta cells in the pancreas, leading to hyperglycaemia and the development of insulin-dependent diabetes. The incidence of type 1 DM in the general population is approximately 10 per 100,000 person-years. In the UK, the prevalence of type 1 DM is estimated to be about 7 per 100,000 person-years. The disease is more common in females, with a female-to-male ratio of 9:1. The mean age of onset is around the 4th to 5th decade of life.

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