

## Original Research Article

## Wandering Spleen with Tortion – A Case Report

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**Abstract:** A 16-year-old male presented with abdominal pain over 12 months, that had acutely worsened over the 5 days pre-presentation. Preliminary outpatient investigations revealed thrombocytopenia 90 (platelets per microliter), and a pelvic spleen on abdominal ultrasound. Contrast enhanced CT of the abdomen and pelvis in the portal venous phase confirmed a pelvic spleen with torsion of the splenic hilum. The spleen appeared hypoechoic on ultrasound. On CT, the spleen had heterogeneous enhancement with some irregularly shaped regions of hypoenhancement. There was a swirl (at least two complete turns) in the splenic vascular pedicle in the left abdomen. The splenic artery demonstrated some enhancement, but no enhancement of the splenic vein. The pancreatic tail was also involved in the torted vascular pedicle. No pancreatic duct dilation, and no infarct of pancreatic parenchyma were found. A small amount of free fluid around the spleen was found with no free gas. The portal vein enhanced normally. Lack of convincing enhancement of the splenic vein and heterogenous appearance of the spleen were suspicious for early splenic ischaemia. Laparotomy revealed an engorged twisted spleen around its pedicles. The spleen was identified in the pelvis with a torted vascular pedicle, which was subsequently detorted and manipulated back into the left upper quadrant (LUQ), with a pre-peritoneal space formed in the LUQ, the spleen was inserted into this pocket.

**Keywords:** Diagnostic imaging, splenic torsion, ectopic spleen, abdominal pain, laparotomy, splenectomy, splenopexy.

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## INTRODUCTION

A 16-year-old male presented with abdominal pain over 12 months, that had acutely worsened over the 5 days pre-presentation. Preliminary outpatient investigations revealed thrombocytopenia 90 (platelets per microliter), and a pelvic spleen on abdominal ultrasound. We report an uncommon case of ectopic twisted spleen with a high risk of infarction and inevitable splenectomy. Diagnostic imaging resulted in preserving the spleen.

## MATERIAL AND METHODS

A 16-year-old male presented with abdominal pain over 12 months, that had acutely worsened over the 5 days pre-presentation. Preliminary outpatient investigations revealed thrombocytopenia 90 (platelets per microliter), and a pelvic spleen on abdominal ultrasound. Contrast enhanced CT of the abdomen and pelvis in the portal venous phase confirmed a pelvic spleen with torsion of the splenic hilum.

The spleen appeared hypoechoic on ultrasound. On CT, the spleen had heterogeneous enhancement with some irregularly shaped regions of hypoenhancement. There was a swirl (at least two complete turns) in the splenic vascular pedicle in the left abdomen. The splenic artery demonstrated some enhancement, but no enhancement of the splenic vein. The pancreatic tail was also involved in the torted vascular pedicle. No pancreatic duct dilation, and no infarct of pancreatic parenchyma were found. A small amount of free fluid around the spleen was found with no free gas. The portal vein enhanced normally. Lack of convincing enhancement of the splenic vein and heterogenous appearance of the spleen were suspicious for early splenic ischaemia.

Laparotomy revealed an engorged twisted spleen around its pedicles. The spleen was identified in the pelvis with a torted vascular pedicle, which was subsequently detorted and manipulated back into the left upper quadrant (LUQ), with a pre-peritoneal space formed in the LUQ, the spleen was inserted into this pocket.

## RESULTS AND DISCUSSION

The spleen appeared hypoechoic on ultrasound. On CT, the spleen had heterogeneous enhancement with some irregularly shaped regions of hypoenhancement. There was a swirl (at least two complete turns) in the splenic vascular pedicle in the left abdomen. The splenic artery demonstrated some enhancement, but no enhancement of the splenic vein. The pancreatic tail was also involved in the torted vascular pedicle. No pancreatic duct dilation, and no infarct of pancreatic parenchyma were found. A small amount of free fluid around the spleen was found with no free gas. The portal vein enhanced normally. Lack of convincing enhancement of the splenic vein and heterogenous appearance of the spleen were suspicious for early splenic ischaemia.

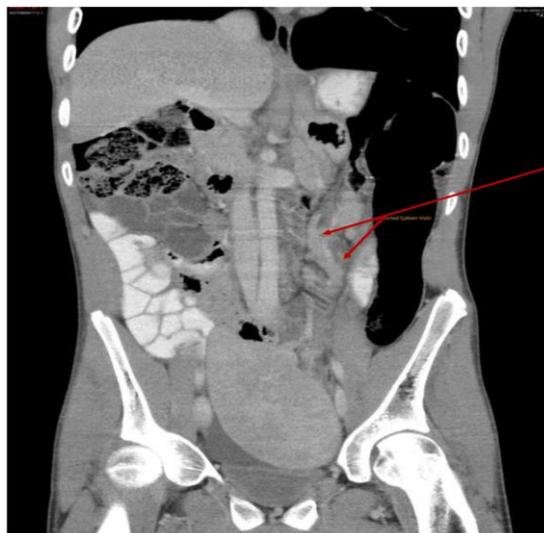
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the pelvis with a torted vascular pedicle, which was subsequently detorted and manipulated back into the left upper quadrant (LUQ), with a pre-peritoneal space formed in the LUQ, the spleen was inserted into this pocket.

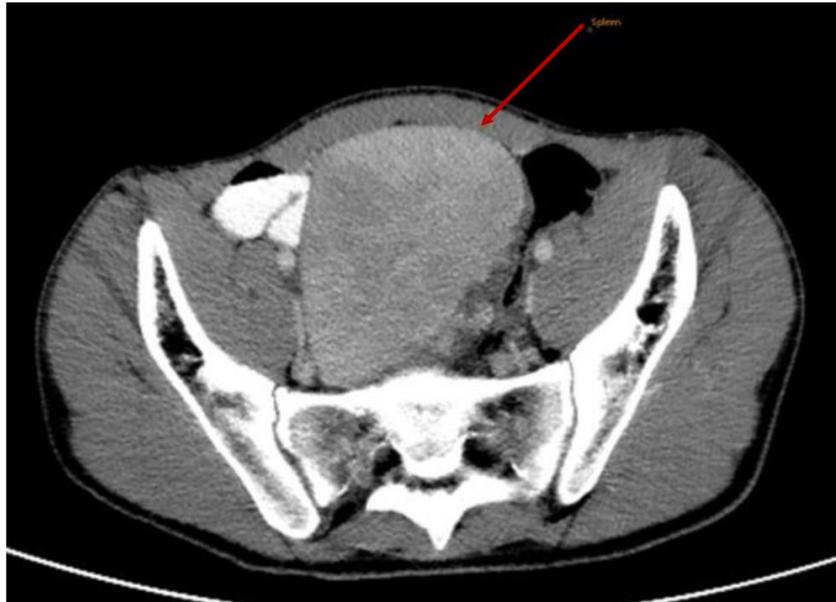
Previous reports of congenital deficiency or acquired laxity of the suspensory ligaments of the spleen may result in extreme splenic mobility exist in literature and case reports [1]. Splenic torsion is extremely rare, which is termed wandering or ectopic spleen predisposes the elongated splenic pedicle to torsion with one study citing a prevalence of 0.3% among 1,413 splenectomised patients [2]. The spleen appeared hypoechoic on ultrasound and hypodense on contrast-enhanced CT. Identification of the highly specific whorled appearance of the splenic vascular pedicles pinpointed the aetiology to that of torsion [2]. Contrast-enhanced CT adds value to the diagnostic workup and should be done in case of inconclusive ultrasound [3].



**Figure 1:** The yellow arrow shows the spleen in the pelvic cavity; The red arrow shows the absence of the spleen in the left upper quadrant which was occupied by the colon; The blue arrow shows a torted splenic vein in the elongated hilum



**Figure 2:** The arrow shows the torted splenic vessels



**Figure 3: The arrow shows the spleen in the pelvic cavity**



**Figure 4: The yellow arrow shows the splenic artery; The red arrow shows the splenic vein**

## CONCLUSION

We present a case of ectopic splenic torsion, diagnostic imaging had contributed dramatically in salvaging the spleen and avoiding splenectomy complications. Although, splenic torsion (with subsequent infarction) is a rare cause of left-sided abdominal pain, this critical differential diagnosis should not be overlooked. Splenic torsion is usually found in the hypermobile and ectopic spleen, however it may also occur in a normally positioned spleen.

## REFERENCES

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