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Figure 1. Abdomen with area of ecchymosis from handlebar impact.



Figure 2. Contrast computed tomography of the abdomen at the level of injury. Used with permission of Trang Truong, MD, Department of Emergency Medicine, Temple University Hospital, Philadelphia, PA.

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A 29-year-old previously healthy man presented to our emergency department immediately after falling from his bicycle and sustaining an injury to his abdomen on the handlebar. He was complaining of diffuse abdominal pain. On examination, his pulse and blood pressure were normal. Abdominal examination revealed a soft tissue bulge above the umbilicus with superficial ecchymosis measuring 3 x 4 cm (Figure 1). This was tender to palpation but the rest of the abdomen was soft, there was no guarding or rebound tenderness, and the bowel sounds were normal. The rest of his examination was unremarkable. Computed tomography of the abdomen was obtained (Figure 2).

For the diagnosis and teaching points, see page 186.

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DIAGNOSIS:

The computed tomographic scan demonstrates a ventral abdominal wall hernia containing small bowel. *Traumatic abdominal wall hernias* caused by direct blunt trauma from bicycle handlebars are uncommon. Fewer than 30 cases have been reported.¹ These injuries are localized hernias resulting from local blunt trauma to the abdominal wall from an object with insufficient force to penetrate the skin, yet able to disrupt deeper tissues of muscle and fascia. The patient was taken for exploratory laparotomy and a small piece of omentum was found in the hernia sac. Additionally a small tear in the mesentery and a serosal defect in the transverse colon were found, both of which were repaired. Most of the literature we reviewed advocates early repair of traumatic abdominal wall hernia.^{2,3}

This report describes a case of traumatic abdominal wall hernia diagnosed by physical examination and confirmed by computed tomography. Other diagnostic modalities have been described to assist in making the diagnosis: ultrasonography, plain abdominal radiographs, computed tomography, and gastrointestinal contrast studies.⁴ Handlebar hernias are rarely encountered in routine clinical practice, despite the common occurrence of blunt abdominal wall trauma. The failure to diagnose traumatic abdominal wall hernia may lead to complications resulting from the hernia such as incarceration and strangulation.⁵ The diagnosis of traumatic abdominal wall hernia remains a challenge for the emergency physician. Large subcutaneous masses following trauma are easily diagnosed; however, smaller defects are often masked by hematomas, preventing the diagnosis from being made.¹ A high index of suspicion for traumatic abdominal wall hernia in the proper clinical setting may facilitate early recognition and treatment.

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