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Acute portal vein thrombosis appearing late, in a patient initially detected with portal venous gas and pneumatosis intestinalis, upon follow-up computed tomography: A case report

Background: Portal venous gas (PVG) and pneumatosis intestinalis (PI) are rare pathologic findings. Although the patients with PVG and PI were reported to be associated with portal vein thrombosis (PVT), delayed appearance of acute PVT, which did not detect on initial CT, in a patient with PVG and PI is extremely rare. **Case report:** A 51-year-old man complaining of epigastric pain, vomiting and diarrhea was referred to our hospital. CT with contrast at admission revealed massive PVG and extensive PI, however, there was no evident PVT. Emergency laparotomy was performed, but bowel resection was unnecessary. Postoperative management included broad-spectrum antibiotics and continuous hemodiafiltration for the treatment of acute kidney injury. On follow-up CT on postoperative day 5, thrombosis was noted in the right portal vein and the umbilical portion of the left portal vein, and anticoagulation therapy was started immediately. On follow-up CT on POD 39, thrombosis in the right portal vein disappeared completely, but left PVT showed spread. Since neither abnormality of laboratory data nor complaint was seen, this patient was discharged and continued to take the oral anticoagulant. Seven months after discharge, PVT had disappeared on follow-up CT without any thromboembolic complications. **Discussion:** It has become growing evidence that benign PVG and PI patients can be managed conservatively with broad-spectrum antibiotics. However, if acute PVT is associated, anticoagulation therapy should be begun to prevent bowel ischemia and/or portal hypertension due to the growth of the thrombus. Therefore, early diagnosis of PVT is considered to be necessary to prevent this disastrous complication. Clinicians should be aware of such a complication can arise, and make best efforts to confirm or exclude the late formation of PVT using CT or sonography in patients with PVG and PI.