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**MESENTERIC VENOUS THROMBOSIS AND ORAL CONTRACEPTIVE USE**

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*Abstract.* A case of mesenteric venous thrombosis in a young woman receiving oral contraceptives is reported. This is the first case encountered in the Caribbean region.

*Key words:* oral contraceptive; thrombosis; Trinidad

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**Introduction**

Since the first record of primary mesenteric venous thrombosis in 1935 [1] there have been relatively few cases in the literature [2]. Even more rare is the occurrence of superior mesenteric venous thrombosis associated with oral contraceptive use. Reed and Coon [3] first documented this possibility in 1963 and a comprehensive review of the literature in 1977 [4] revealed a total of 17 cases; most of these occurred in Britain and the United States but it is expected that as oral contraceptive use becomes more widespread this condition will be seen in developing countries. Following is a case from Trinidad, the first to be reported from the Caribbean region.

**Case report**

A 37-year-old woman was admitted to hospital with a 6-day history of colicky upper abdominal pain. This pain was aggravated by eating any type of food and became progressively worse. She vomited twice daily prior to admission but had no haematemesis, diarrhoea, constipation or blood in the stool. She was taking the contraceptive pill Anovlar (norethisterone acetate 4 mg, ethinyl oestradiol 0.05 mg) regularly for the previous 5 years.

Though complaining of much pain, she looked quite well. She was not in shock; pulse 80/min, BP 130/80 and temperature 99°F. There was slight abdominal distension, mild central abdominal tenderness but no mass or rebound tenderness was appreciated. Haemoglobin was 13.1 g/dl, PCV 40, blood urea 79 mg%, SGOT 14 KA units, alk. phosphatase 7.0 KA units, blood sugar 169 mg% and sickle test negative. The elevated WBC 22,300/cumm showed a differential of polymorphs 93%, lymphocytes 5% and monocytes 2%. Because her abdominal signs were not remarkable, she was admitted, allowed oral fluids and observed. The next day, her abdominal pain worsened and the distension increased. She vomited 600 ml of blood stained fluid and went into shock. After resuscitation laparotomy was performed. There was blood-stained free fluid in the peritoneal cavity. 75 cm of gangrenous ileum was resected and end-to-end anastomosis performed. The remaining small intestine was oedematous and in dividing the superior mesenteric vessels it was noted that the arterial pulsations and lumen were normal while soft thrombus oozed from the cut mesenteric vein.

Post-operatively, her condition remained critical. She was toxic with a respiratory rate of 36/min, a thready pulse of 132/min and unstable blood pressure with frequent hypotension. She was heparinised, given intravenous antibiotics and appeared to improve over the next 48 hours. However, the abdominal distension persisted and on the fourth post-operative day she passed black tarry stool. She developed bilateral pneumonia, remained toxic with unstable pulse and blood pressure and died on the sixth post-operative day. Permission for post-mortem was not granted.

## Discussion

Vascular complications of oral contraceptive use include hepatic vein thrombosis, cerebrovascular accidents, venous thrombosis in the lower limb and mesenteric vascular occlusion. In spite of what appears to be abundant epidemiologic evidence relating contraceptive use to thromboembolic phenomena [5], the precise pathogenesis remains unclear and is almost certainly multifactorial. Ruoff and Ranson [6] demonstrated a persistent hypercoagulable state in a patient with venous mesenteric infarction, 19 months after she discontinued contraceptive medication. Irey and Norris [7] showed intimal proliferation associated with hormonal contraceptives and suggest that this may be an important factor in thrombotic events.

Whatever the pathogenesis, mesenteric venous thrombosis associated with oral contraceptive use carries a case fatality rate of over 30% and, in patients who have survived, major sequelae such as burst abdomen, intra-abdominal abscesses, progressive gut infarction and septicaemia are quite common [8]. Thus, although rare, mesenteric thrombosis due to oral contraceptive use is extremely important because of this high morbidity and mortality.

Early diagnosis is valuable since reversible mesenteric ischaemia has been demonstrated before gangrene is established and these cases can be managed conservatively successfully [9]. In spite of some successful reports of conservative therapy, the surgeon must be prepared to operate on any suspicion of gut infarction since conservative treatment in established gut gangrene is invariably fatal. In addition, more than one operation may be needed since thrombosis can be progressive and result in infarction of previously viable bowel [10].

Perhaps the most dangerous aspect of this disorder is the relatively slow and unremarkable onset of signs and symptoms; consequently, the diagnosis is often missed initially and recognised only when advanced gut gangrene is established. Increased awareness of mesenteric vascular thrombosis due to contraceptive use should lead to earlier diagnosis and prompt treatment, with improved results. The condition should be considered especially in young women, (average age 34 years) on hormonal contraceptives, who present with vague abdominal pain of gradual onset and unexplained aetiology.

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