

ISCHAEMIC VENOUS THROMBOSIS

(A Case Report)

by

J. J. MIRCHANDANI,* M.D.

K. SHARMA,** M.D.

ZOYA MEHTA,*** M.S.

and

S. P. VAISH,**** F.R.C.S.

Introduction

Puerperal sepsis with pelvic, femoral and occasional cerebral thrombophlebitis is encountered commonly in India as most of the confinements continue to be managed at home often by untrained persons. Common as 'White leg' is in hospital practice the rare form of 'blue thrombophlebitis or phlegmasia cerulea dolens' or venous gangrene is rarely encountered.

Present case of venous gangrene is the only case in last 10 years in this hospital which has on an average 11,000 obstetric admissions and 6,000 deliveries per year. Various terms have been used interchangeably gangrene of venous origin, pseudoembolic phlebitis, phlegmasia cerulea dolens and gangrene, acute massive necrosis. Haimovici (1971) recently has labelled all cases as ischemic venous thrombophlebitis and subdivided in two clinical forms.

(1) *Phlegmasia Cerulea Dolens*. In this ischemic manifestation are reversible and block of the proximal veins is not total.

(2) *Venous Gangrene*. This is more serious, venous block is total and changes are irreversible, prognosis is more serious. Five cases have been reported earlier in Indian literature.

CASE REPORT

Mrs. S., 24 years, had a full term normal home delivery, conducted by a 'dai' on 29-1-78. There was no postpartum haemorrhage or postpartum fever till the 12th of February, when she started having pain in the left inguinal region and subsequently developed swelling of the whole leg associated with high grade fever. She developed discoloration of the toes on 23-2-78 and then was referred to Lady Hardinge Medical College Hospital on 24-2-78. On examination the patient was very toxic, febrile, pale, pulse 96/min. had no significant lymphadenopathy.

Locally: Odema of the whole right leg was present and was more marked on the dorsum of the foot. All 5 toes were discoloured, cold and hypoaesthetic. Demarcation line between gangrenous area and normal skin was one inch proximal to the metatarsophalangeal joints. Gangrene on the plantar aspect extended half an inch more proximally. Hyperaesthesia was noted at, and above the line of demarcation. Pulsations distal to femoral artery were not felt possibly due to oedema, but movements of toe were present.

*Associate Professor, Department of Obst. & Gynec.

**Lecturer, Department of Obstet. & Gynec.

***Senior Resident, Department of Surgery.

****Pool Officer, Department of Surgery.

Lady Hardinge Medical College and Sucheta Kriplani Hospital for Women, New Delhi 110001.

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Conservative treatment was started limb was elevated, analgesic and antibiotics, Lomodex and vasdilators were given. Gradually the oedema subsided and arterial pulsations were felt normally. Hb was 9Gm. TLC 9500, Platelets 350,000.

On 15-3-1978 continuous epidural block was given in an attempt to improve the circulation to the gangrenous area. This was continued for 48 hours. Gradually the line of demarcation started receding and oedema over the dorsum of foot also subsided. All the toes became dry and shrivelled up.

Midtarsal amputation was done on 22-3-1978. Postoperative recovery was uneventful. Patient had Duvadilan for six weeks postoperatively.

Patient was discharged on 6-5-1978 and was advised to have walking boots fitted 1 month later.

Comments

Clinical manifestation of thrombophlebitis depend on the site and length of the main veins involved. In case of 'white leg' occlusion of common femoral vein is above the entry of profunda femoris. Occlusion distal to profunda vein may cause slight and transient swelling confined to lower leg. It is more frequent on left side possibly due to pressure caused by right common iliac artery as it crosses over left iliac vein.

According to Haimovici (1967) venous gangrene is always preceded by phlegmasia cerulea dolens or blue thrombophlebitis and phlegmasia alba dolens in 60% cases and other leg is also involved in 25% of cases as in 1 case reported by Chandra and Gupta (1964). Venous gangrene has been reported after any trauma, operation, parturition and associated with malignancy. In addition heart disease, pulmonary disease, blood dyscrasias, ulcerative colitis, venous disease have also led to ischaemic venous thrombosis. Haimovici (1967) reviewed a total of 400 cases including 45 of his own; 15 (8.4%) of 175 cases of phlegmasia cerulea dolens and 18 (11.1%) of

158 cases of venous gangrene were due to postpartum thrombophlebitis. Birlow and Sagar (1975) reported malignant disease to be the commonest predisposing factor, being present in 25-60% of the cases.

Arterial spasm at operation and experimentally in deep venous thrombosis had earlier been shown by DeBakey *et al* (1939) and Ochsner and DeBakey later in 1949 concluded that vasospasm was not the initiating factor though it may have a contributing role.

Complete sudden blockage of venous outflow by widespread thrombosis is the most acceptable explanation. Back-pressure causes the stasis of arterial flow in peripheral vascular bed, leading to anoxia and possibly tissue necrosis. According to Haimovici (1967) and Birlow and Sagar (1975) venous gangrene is the extreme irreversible consequence of the total thrombosis of veins of an extremity. It is always preceded by phlegmasia cerulea dolens, which is a reversible stage during which venules are still open. It is associated with pulmonary embolism in 35-40% of cases. Haimovici (1967) reported mortality of 17% in phlegmasia cerulea dolens and 41.6% in venous gangrene.

The clinical triad of pain, cyanosis and oedema in phlegmasia cerulea dolens suggests acute circulatory disturbance. Cyanosis is as striking as pain, the violet discoloration of the skin with purpuric like lesion has sharp line of demarcation, coldness of distal parts is prominent in early stages. The neurological manifestation i.e. loss of sensation, numbness and hyperaesthesia and loss of motor power are either absent or mild in nature differentiating it from arterial ischaemia.

Massive oedema which may be due to extravasation of 4 to 5 litres of fluid may

be responsible for circulatory shock which was reported in most of the cases by Morgan *et al* in 1948 and was a noticeable feature in case reported by Dass and Kotwani (1963). Odema may extend upto labiummajus and may cause even superficial bullae as were noted on the dorsum and planter aspect of foot in the case reported by Pinto Rosario (1967). Once the gangrene has set in thrombolectomy is of little value. Elevation of limb facilitates return of trapped blood. In addition to analgesic and antibiotics, vasodilator drugs and anticoagulents are generally recommended.

No sympathetic block or vasodilator drugs were used in the case reported by Dass and Kotwani (1963) yet the case showed continued improvement and gangrene got localised at midtarsal level. This patient went home 5 weeks later before amputation could be done.

Amputation should be delayed to allow for maximum improvement. Spinal block, paravertebral block or epidural

blocks have been tried to relieve the pain due to arterial spasm and possibly to improve circulation. Relief of pain was noticeable in case reported by Dass and Kotwani (1963). Epidural block was not given initially in the present case as it was considered rather late and vasodilator drugs were given. It was tried before deciding final level of amputation.

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