therefore, feasible to suppose that this permitted the setting free and absorption of the fat. At such a late date venous thrombosis is more common. This is due to a thrombosis occurring in the veins of the neighborhood; a clot is set free from this and causes an embolism which reaches the right side of the heart and the pulmonary circulation, and dyspnœa results. The cases which Dr. Primorse has been able to find recorded of thrombosis have nearly all proved fatal, they have occurred about the sixteenth to the twentieth day, and have occurred in people above middle age. Then, again, the blocking of a vein in the limb in this way usually causes ædema, of which there was none in this case. Venous thrombosis and embolism is more likely to prove fatal than fat embolism, although Erichsen records a case in which the symptoms subsided in a few hours. There is evidently some possible source of error in the diagnosis of these cases. Thus Verneuil records a case of a man, æt. 60; fracture of both bones of the leg; developed symptoms three and a half weeks after the accident of pulmonary embolism, and died; the existence of a clot was suspected, but the vessels post mortem were found entirely free of There is no record of any minute examiclot. nation of the lungs, and this case therefore might very possibly have been one of fat embolism. That pulmonary embolism does occur, however, at times, has been proved by post mortem examination; thus Shanley Boyd records a case of fracture of the metatarsal bones, followed by thrombosis and emb lism, and death. Clots of antemortem formation were found plugging the pulmonary artery.

Hamilton explains the effect of fat emulsion in the following way: The white corpuscles are of lighter specific gravity than the red, and in consequence pass to the periphery of the blood stream; whilst the red, which are about the same specific gravity as the plasma, pass in the axial stream. In the capillaries the white corpuscles exercise a considerable amount of friction against the vessel wall, and if they are much increased in number will impede the circulation very considerably. They may even bring it to a standstill. Foreign materials may be introduced into the blood which will act in the same way, as evidenced in the effect of air, aspirated into veins wounded at the root of the neck, or the absorption of fat causing fat embolism; this may cause complete blockage of the capillary circulation in the lung. Minich states that fat embolism *invariably* occurs after fracture, except in children, but not sufficient to cause symptoms.

The fat may be absorbed by the veins or lymphatics; according to Wiener, the intervention of the lymphatic glands does not prevent absorption.

The urine may, or may not, contain fat after the occurrence of fat embolism; the presence of fat usually occurs late, some ten days or a fortnight after the symptoms, when the fat is eliminated by the kidneys from the system. Fat embolism has occurred in other conditions besides fracture, *e.g.*, rupture of the fatty liver, extensive injury to the subcutaneous fat, etc.

Dr. Cameron had brought a case before the notice of the socie; y some years ago. The condition, which proved fatal, occurred after a fracture of the rib. Minich and Scriba state that the nearer the fracture be to the heart, the more likely is fat embolism to occur. The assumption that Dr. Macdonald's patient suffered from fat embolism is a fair one, but the occurrence of such symptoms in the third week is consonant with venous thrombosis. The fact of its occurring late, however, in this case, is not a powerful argument against the possibility of its being fat embolism, because the movement at the seat of fracture might have allowed absorption of fat to occur. The condition of fat embolism in the pulmonary circulation rarely proves fatal; it is only when the emboli reach the brain, more particularly the medulla, that a fatal result is apt to ensue. Patients who die late, of "shock " so-called, have often inreality succumbed to the effects of fat embolism. Gamgee has shown that the amount of fat in the blood may be enormously increased without giving rise to symptoms.

Dr. Peters considered that at least one-half of the capillaries of the lung must be obstructed before death is caused. Scriba found that fat occurs in the urine on the third day, due to absorption of fat consequent upon the pressure of inflammatory effusion at the seat of injury. The fat again appears in the urine on or about the fourteenth day, when it is eliminated from the pulmonary capillaries. The case reported