

early stage of pyæmic abscesses just beginning to break down, the result of septic emboli? Some pathologists hold that the hemorrhagic infarct of the lung was quite different in its mode of origin from infarct in the spleen or the kidney; the latter being the result of non-septic embolism, while the pulmonary infarct was a true hemorrhage and not embolic. The embolic infarct contained no blood, and was pale in color, except in the inflammatory area around the periphery. The wedge shape of the pulmonary infarct was to be accounted for by the mode of branching and distribution of the bronchi in the connective tissue of the organ, thus causing the extravasated blood to occupy a wedge-shaped area. True infarcts were always the result of non-septic emboli, while septic emboli gave rise to pyæmic abscesses.

Dr. Primrose said he would like to know the pathological difference between *septicæmia* and *pyæmia*. Clinically, this was one of pyæmia; its progress was slow and there were metastatic abscesses. In septicæmia the clinical course is much more rapid; there may be small hemorrhages in various parts, but no abscesses. The pulmonary infarcts here he regarded as the first step in the development of abscesses.

Dr. McPhedran thought there was no radical difference between pyæmia and septicæmia; they were really varieties of one condition. Although these cases of ulcerative endocarditis generally prove rapidly fatal, yet they may run on for from six to eight or twelve weeks with remittent pyrexia. He mentioned several cases that had come under his own observation where there was such a prolonged history of ulcerative cardiac lesion, and he thought there was a chronic as well as an acute ulcerative endocarditis. This case was uncommon in having the ulceration on the right side of the heart. The presence of a pulmonary lesion is unusual, but was to be expected here. He asked if there had been any chills, and what was the cause of the albuminuria. Many cases have no albumen in the urine.

Dr. Acheson said he thought there was a distinct pathological difference between *septicæmia* and *pyæmia*. In septicæmia there was merely the absorption of the toxic products of micro-organisms into the blood, but no actual transference of pus-producing organisms from the

primary lesion and subsequent lodgment of these in the tissues and organs at a distance, with the resulting metastatic abscesses. In pyæmia there is such an actual transference, giving rise to new foci of microbe development and tissue necrosis. In other words, there is multiple septic embolism and metastatic abscesses.

Dr. Primrose said that in septicæmia pathogenic micro-organisms were found freely circulating in the blood.

Dr. Acheson admitted this, but said that, although circulating in the blood, they did not multiply there to any great extent, nor did they invade the tissues at a distance from their primary source, settle down there, multiply, and cause necrosis. In one sense, septicæmia and pyæmia were only varieties of one condition—an intense toxæmia of microbic origin; but there were the two ways in which this might be produced easily distinguishable. Pyæmia was a more serious condition than septicæmia.

Dr. Oldright asked why the left side was more frequently the seat of ulcerative endocarditis than the right.

Dr. McPhedran said that the usual explanation given was that the left side was more subject to strain; abrasions of the endocardium were thus more likely to occur on the left side, and these gave entrance to the micro-organisms. Perhaps all forms of endocarditis, simple and ulcerative, were of micro-parasitic origin.

Dr. Peters, in reply, said he thought pulmonary infarcts were of embolic origin; they had been produced experimentally by mechanical non-septic emboli. The blood contained in them was due to regurgitation from the surrounding vessels which anastomosed with those in the area of distribution of the occluded vessel. If the emboli were aseptic, the infarcts would be gradually absorbed, leaving cicatrices; but if they were septic, abscesses would result. In regard to septicæmia and pyæmia, he thought the distinction made by Dr. Acheson was a good one; but he believed that septicæmia sometimes developed into pyæmia. The element of physiological resistance was an important one; the organs in septicæmia might be circulating in the blood, but owing to the resistance of the tissues at first they found no suitable nidus; after a time, however, the physiological resistance becomes so lowered by the