Commission laid down the rule that deaths from chloroform *always* occurred in this way, entirely ignoring such cases as the one here reported. Throughout the whole history of chloroform as an anæsthetic, cases of sudden death have occurred from time to time in patients with sound organs, often during slight operations or before operation was begun, and at an early period of anæsthesia, in which arrest of heart's action and cessation of respiration were noted at the same moment, or in which the arrest of heart's action was first noticed. Now, it must be borne in mind that in strangulation, asphyxia or paralysis of the respiratory centre, causing complete cessation of respiration, the heart's action continues and the radial pulse can be felt for an appreciable space of time—often for some minutes. On the contrary, sudden and complete arrest of the heart's action is *immediately* followed by cessation of respiration. It is, therefore, highly probable that when pulse and respiration appear to fail at the same moment, the primary failure is in the heart. The fact already noted, that the slight incisions in the scalp bled only slightly, has led me to think that perhaps there was, even then, some inhibitory process at work affecting the capillary circulation, and apparently beginning at the periphery, as the pulse was still full, strong and regular. Besides, the heart failure was not complete, when the radial pulse first became so weak as to be inappreciable, as cardiac movements were recognized later, and there was a return of respiration for a little more than a minute.

Dr. JAMES STEWART remarked the cause of death was heart failure. This, he believed, was the usual cause, according to the investigations made in this country and in Great Britain. Surgeon Laurie had made various attempts to prove that death was due to respiratory paralysis; but since his paper on this subject in connection with the Hyderabad Commission appeared, many others have closely investigated the subject, and almost all agree that death takes place, not through the respiratory, but through the cardiac centre. The matter is of special importance, as Laurie's teaching is now so widespread that the administrator is led to pay greater attention to the respirations, to the neglect of the pulse; whereas in reality it is the latter which should be the more closely watched as the source of danger.

Dr. GORDON CAMPBELL thought that in the case under discussion there must have been some recovery of the heart, temporarily at all events. Dr. Bell said that after the stoppage of the heart the lungs continued acting for six or eight respirations, then they also ceased and the patient became very livid. However, after artificial respiration and other restorative measures had been adopted, the patient again began breathing naturally, and after a certain number of full respirations the lividity became diminished and the appearance of the patient so far improved as to lead Dr. Bell to believe all was well. This improvement could not occur from the mere æration of the blood in the lungs. To relieve the congestion of the peripheral circulation the heart must have acted also, and on this account Dr. Campbell believed that here at least the initial paralysis of the heart was not final or permanent.

Dr. MCCONNELL remarked, that according to a report of some investigations recently undertaken in the United States by Hare and Thornton, the Hyderabad theory was confirmed, and death did seem to occur through respiratory failure.

Dr. BLACKADER said that the present opinion of investigators with regard to the action of chloroform in animals, especially dogs, was that its first toxic effect was not upon the heart, but upon the respiratory and vasomotor systems. He thought this view must be now generally adopted. Its action upon man, however, seemed occasionally to differ from this. From the clinical reports of several fatal cases it seemed to have been shown that chloroform clearly in certain cases had a primary toxic action upon the heart in man. He thought these contradictory results might be reconciled by the fact that the former dealt with lower animals in a healthy condition, whereas the latter had to do with the human species, and often where pathological conditions existed.

Dr. JAMES BELL said that in accepting the results of these experimenters we must not lose sight of the fact that although the usual mode of death from a narcotic drug, such as chloroform, ether or opium, may be, and very likely is, through the respiratory centres in cases such as he had now reported, the death is not the result of the narcotic qualities of the drug, but is something which occurs once in about three thousand times, or perhaps only once in fifty thousand times. The experiments alluded to have never gone beyond a couple of hundred cases, and therefore were not likely to meet with this special result of chloroform. He believed it very likely that where death was produced by narcotic action of the drug, it occurred through the respiratory centres, and he had no doubt at all that accidents often arose from an overdose of chloroform given by a careless administrator. He had seen instances of such accidents himself where, though they did not end fatally, they might have done so. The point is, however, that once in a certain number of cases where you least expect it, in minor operations, or even before the operation has begun, where only a little of the drug