built up as they have been years ago from a tainted blood. My impression is, that this conjectural view is supported by clinical experience, and that we do not find any benefit from continuing the iodide after the local cure has been completed. I think this answers the last query put to me; but, if there be any points upon which my explanation may be considered not sufficiently explicit, I will gladly make a further attempt.

CASES WHERE DEATH HAS FOLLOWED THE INJECTION OF THE PERCHLORIDE OF IRON INTO THE UTERUS TO ARREST POST PARTUM HÆMORRHAGE.

By T. SNOW BECK, M.D.Lond., F.R.S.

IN a review, published in the *Edinburgh Medical Review* for the present month, of Dr. R. Barnes's work, *A Clinical History of the Medical and Surgical Diseases of Women*, it is said, "he (Dr. Barnes) has the manner of a schoolmaster towards all those who differ from him. He is always laying down principles and theories;" and, if I might complete the picture, I would add, "and himself constantly violating the principles he lays down." Dr. Barnes's "clinical experience" is also characterised in the same review as "an example of fireside, not bedside, description," the "fireside descriptions," it may be added, being so frequently inaccurate, that they amount to descriptions the contrary to the facts. Different examples of these "fireside" inaccuracies occur in Dr. Barnes's recent communications; but I will only advert to two of them. I have never said that I "had seen death from septicæmia following the injection of the perchloride of iron into the uterus to arrest post partum hæmorrhage," though a case of this affection after injection with the perchloride of iron is reported by P. B. Giles, junior, in the *Obstetrical Journal*, No. vii, p. 442. But I have said that the symptoms observed in the fatal cases which have followed the injection of the perchloride of iron to arrest post partum hæmorrhage, greatly resemble the symptoms attending puerperal septicæmia, but differ from them in being apparently even more fatal, and, so far as we at present know, in there not being any means by which the fatal termination can be averted.

With reference to the charge of "persistently evading the plain duty incumbent upon us all to set forth the facts from which alone scientific conclusions can be drawn," I would merely state the following facts. In September 1872, I forwarded to the secretary of the Obstetrical Society, Dr. W. S. Playfair, some of the following cases, with a commentary. After a few weeks, I was informed that the president, Dr. Braxton Hicks, considered the paper to be of a "controversial character," and, as the statements contained in it differed from those which Dr. Barnes had previously made on the same subject, the paper could not be allowed to be read. After the experience I had previously had, this announcement did not surprise me; and I decided to print these cases, with others, in a separate form; the papers which have appeared in the *Obstetrical Journal* being portions taken from the manuscript which I drew up with this intention. However, it was found impossible to exclude the subject altogether from the Society, and the case which occurred in the practice of Dr. Heywood Smith was, after considerable difficulty, admitted and read; but all expression of opinion contrary to the views of Dr. Barnes and Dr. Braxton Hicks was endeavoured to be suppressed by noisy clamour. At this meeting, the uterus and appendages were placed before the Society; drawings of the appearances they presented were made and shown; Dr. Barnes was present, and might have satisfied himself as to the accuracy of the drawings, and the description of the appearances in the preparation; but he never examined the uterus and appendages submitted to the Society. This preparation, with others, also remained in my house for months, were seen by some of the Fellows of the Society, and might have been seen by all. Truly, it is said, "there are none so blind as those who won't see."

The following cases were drawn up for publication in the present form. They are given in considerable, perhaps tedious, detail; but, as the facts they demonstrate have been, and probably may continue to be, much disputed, I have thought it better to give them in full.

CASE I.—A. C., aged 30 years, was admitted into the British Lying-in Hospital, under Dr. Heywood Smith, at 2.30 A.M. on January 26th, 1872, in labour with her fourth child. Her previous history, as far as could be gathered from her friends, was, that she had been twice married; during her first marriage, she had two children, besides two miscarriages, with both of which latter she had severe floodings; during the second marriage, she had also had two miscarriages, with severe loss at each, that with the last being so serious that she was obliged to keep her bed for four months. Her health between the pregnancies was reported to have been pretty good.

January 26th. She was delivered naturally by a pupil midwife, at

4.20 P.M., of a male living child, weighing eight pounds fourteen ounces, after a labour of twelve hours' duration. The placenta came away easily twenty-five minutes after the birth of the child, with not more than the usual loss of blood.

January 28th. She was previously doing well; the lochia natural, without offensive odour; the milk came yesterday afternoon. About 3 A.M., she awoke with a severe pain at the hypogastrium, and from this time the lochia were rather scanty; the bowels not open.

February 4th. Tenth day. Three days ago, she was moved downstairs in a chair, but had not been out of bed before or since. Yesterday morning, some hæmorrhage occurred, with slight pain, and, this morning, she passed several clots; nothing had occurred to account for this bleeding; pulse 76; tongue clean; the orifice of the uterus patent as far as the inner os, and bleeding. She was ordered thirty grains of ergot of rye every four hours.

February 5th. Eleventh day. The orifice of the uterus was not so patent; it lay high up, and backwards. She had very little pain from taking the ergot of rye. Bleeding continued yesterday till the evening, and commenced again this morning. The uterus was injected with one part of liquor ferri perchloridi, and eight parts of water, with Higginson's syringe, and a long elastic tube was passed into the uterus.

February 10th. Sixteenth day. The uterus was again injected in the same manner as before, with liquor ferri perchloridi and water. I believe the bleeding had never actually ceased; and, though it was much lessened, still some discharge of blood continued.

February 14th. Twentieth day. Bleeding returned on the night of the 11th, and the uterus was again injected on the 12th with one part of liquor ferri perchloridi and four parts of water. It was again injected to-day with equal parts of liquor ferri perchloridi and water. No bad symptom had followed any of these injections; no pain; appetite and spirits good; she slept well.

February 15th. Twenty-first day. The uterus was again injected at 11 A.M. with strong liquor ferri perchloridi, using the intrauterine syringe, which holds about half an ounce, but only about two drachms were injected. Very severe and sharp pain at the lower part of the stomach directly followed, and, from this time till the evening, she rolled about in the bed with severe pain. She said she "felt as if something had been torn out of her." Poulitices were applied to the hypogastrium, but the pain was not relieved till the evening; she was violently sick; no bleeding occurred after this injection. The colour of the blood was bright red, not dark; latterly, the bleeding ceased after each injection, and recurred again a little before it was repeated; it was a continuous oozing, but never amounted to a flooding.

February 17th. Twenty-third day. Noon.—Pulse 140, full, weak; tongue dry at sides; she was feeling very weak; in no pain; there was a slight coloured discharge; she was ordered cinchona, ammonia, and opium. 11 P.M.—Pulse 160; temperature 104.3; respiration 32; tongue dry in the centre, moist at the sides; abdomen distended; she vomited everything; had been delirious this afternoon and evening; no bleeding per vaginam, but a brown and offensive discharge. Hydrocyanic acid with carbonate of soda were prescribed for the sickness, also one minim of tincture of aconite every half-hour.

February 18th. Twenty-fourth day. 11 A.M.—Pulse 148; temperature 104.1; respiration 24; tongue moist; abdomen distended; she was not in so much pain, and had not been sick after the second dose of the hydrocyanic acid mixture. 10 P.M.—Pulse 140; temperature 103; respiration 24; abdomen softer; she had had seven or eight full evacuations from the bowels, passed urine, and slept a little; she had been free from sickness all day, till now.

February 19th. Twenty-fifth day. 3.15 P.M.—Pulse 168; temperature 105.4; tongue darkish; she took her food well; the bowels had acted; motions not relaxed; there was occasionally great dyspnoea; no pain; she had cough, and expectorated froth; there was kicking of the bed-clothes. 11 P.M.—She was in a cold sweat, sinking.

February 20th. Twenty-sixth day. 10 A.M.—Pulse 152; temperature 105.1; respiration 52; tongue moist and cleaner; abdomen softer; no pain; she slept in the night; had eight ounces of brandy in the night. 10.15 P.M.—Pulse 160; temperature 103; respiration 48; tongue dry in the middle, and moist at the sides. She had ten ounces of brandy, one pint of ale, a little meat and beef-tea.

February 21st. Twenty-seventh day. Pulse 144; temperature 99.4; respiration 36; tongue moist; she had been very delirious and violent; did not sleep. 11 P.M.—Pulse 140; temperature 101.2; respiration 44; tongue moist; she had not been sick since morning; right eyelid swollen; urine bright coloured; diarrhoea since 2.30 P.M.

February 22nd. She died at 8 A.M., the twenty-eighth day after the confinement, and the seventh day after the supervention of the symptoms.

The uterus was large, measuring about five inches long by four inches

broad, the walls being about three-quarters of an inch in thickness. The peritoneal covering was smooth and glistening; the tissue soft, but not unnaturally so, and on both the anterior and posterior surfaces, between the median line and each side, marked by longitudinal discolorations of a black leaden hue, which evidently indicated the course of large sinuses in the substance. On each side, the large veins in the middle of the venous plexuses, which occupy this situation, and extend down to the upper part of the vagina, were filled and distended with black grumous material, which stained the inner coat and the inner portion of the middle coat of the vessels black; but this staining did not extend to the cellular tissue surrounding the veins. The coats were otherwise natural, being neither thickened nor injected. On making a section through the posterior wall, the uterine tissue was perfectly healthy. Several sinuses of various sizes were divided and found filled with opaque, rather thick, perfectly black material, having more resemblance to thick writing ink than anything else. The delicate tissue lining the inner surface of the sinuses was stained black, but the contractile tissue surrounding these canals was perfectly healthy, and of the natural colour. At several points on the section of the uterine walls, the uterine arteries projected from the cut surfaces. On two longitudinal sections being made into the walls of the uterus on the posterior surface, and midway between the central line and each lateral margin, many sinuses, of various sizes, were cut across, and all were filled with a similar black material found in the other sinuses and veins, and yielded abundant evidence of iron by chemical tests. As in the other sinuses, the inner tissue was stained black, but the surrounding contractile tissue was quite healthy, and of the natural colour. The black material evidently was not coagulated blood, but it closely resembled the black slightly mucous fluid on the inner surface of the organ. The inner surface of the uterus was covered with a very dark, almost black, slightly mucous fluid, and, at the junction of the upper third with the lower two-thirds, an oval excavation on the anterior surface was seen, five-eighths of an inch long by four-eighths of an inch broad, and full one-eighth of an inch deep. This was filled with a soft material stained perfectly ink-black, the edges being sharp yet slightly rounded, and, at the right side of this excavation, attached at the upper and outer corner, was a rounded soft mass about the size of a flattened filbert, which, when the cut surfaces of the uterus were brought together, appeared accurately to fill the excavated space. This mass, when subsequently examined with the microscope, showed distinctly various placental tufts, and was attached at its upper and outer corner by a broadish band of soft uterine tissue. After gently washing the surface with a stream of water, it presented the usual soft, reticulated appearance of the uterus after parturition; was of a dark, mottled, reddish-black colour, and, on the anterior surfaces surrounding the excavation previously mentioned, the tissue was fuller, softer, and slightly raised above the surrounding surface, thus marking the previous position of the placenta. This raised portion measured one inch and five-eighths by one inch and two-eighths, and, over the whole of its extent, numerous openings were seen filled with black material similar to that found in the divided sinuses and in the veins at the sides of the uterus. These openings varied considerably in size, some being of the size of a crow-quill, others only small dots, the larger being situated over the centre, the latter chiefly around the circumference. Towards the lower part of the anterior inner surface, three or four worm-eaten-looking patches existed, having in their centre a softer tissue, which appeared similar to the soft tissue in the centre of the larger excavation, and to be the result of a similar morbid process. The softer tissue from the centre of the larger excavation consisted principally of contractile fibre-cells of various sizes—either isolated, in bundles of a few together, or in small strise or bands, many stained black, and most truncated at each extremity, but none presenting any remains of the usual fatty degeneration—these groups of fibre-cells being mixed up with much granular matter, round and oval corpuscles, and numerous flat corpuscles of varying dimensions; the granular matter and round and oval corpuscles being only partially stained black. The softer tissue from the worm-eaten portions consisted of much granular matter in amorphous tissue, numerous round and oval corpuscles, many fat globules, and some modified columnar epithelium. Three large open orifices of sinuses existed within the larger excavation, and several smaller ones surrounded the margins, all filled with similar ink-black material. Three arteries of considerable size also projected from the surface of the same excavation—one to the extent of a quarter of an inch—all of the same calibre throughout, the ends being broken off, and the canals free and unobstructed. Over the centre of the portion which marked the seat of the placenta, many white points were noticed, after careful examination under water with a lens, which, on being raised with the sharp point of a needle, could be drawn out from the surface, and seen to be the broken ends of small arteries. Some of the ends of the arteries thus raised were cut off and examined with the microscope,

in a menstruum of glycerine and acetic acid, and in all those so examined the walls of the artery were thin and translucent, and directly surrounded by soft uterine tissue, the cut ends being shown by the sharp edges caused by the scissors, the broken off ends by being slightly corrugated, with the edges slightly rounded; but, in all, the canal was perfectly free and unobstructed. Some of the arteries on the section through the walls of the uterus were also braced down to the inner surface, where they ended in broken off extremities similar to those at the seat of the placenta, only they were considerably smaller in size. The more the uterus was examined, the more the conviction was forced upon the mind that the larger central excavation was in some way depending upon the pressure of the placenta, which remained attached to the upper portion of the uterine cavity. The excavation appeared to be precisely at the points where this piece of placenta would press upon when the cut surfaces of the walls were brought together, and it was just the size of this portion of placenta. But the worm-eaten portions lower down, on the inner surface, would seem to indicate that some morbid action had been also going on at those parts independent of any pressure. It is not improbable that the same morbid action had been present at the seat of the larger excavation, and that, in consequence of this, the pressure of the piece of placenta had produced more effect than it would have done had the surface of the uterus been perfectly healthy. However this may be, the tissues which immediately surrounded the larger excavation were very slightly, if at all, altered from the healthy structure. The ovaries and Fallopian tubes were quite healthy.

CASE II.—Mrs. S. A. was confined in her third labour on March 14th, 1872. She was twenty-nine years of age, rather tall, of fair complexion, well made, a healthy young woman. Her first confinement was natural; the second with twins, after which she was weak and ill for some time. She was very well during the last pregnancy. She was taken with pains about 9 A.M., and during the day they were of "not much account". The waters broke about 11 P.M., after which the pains became stronger, and the child was born about 8 A.M. A good deal of blood was lost, but "thought not more than was usual". The placenta was withdrawn about twenty minutes after the birth of the child, by drawing upon the cord and pressure from the hand of the medical attendant upon the abdomen; it was rather large and some clots came away at the time. A binder was applied, but about a quarter of an hour or so afterwards she remarked that "there seemed to be a good deal of something coming away". On examination, it was found that a good deal of bright red-coloured blood was flowing away. Pressure was now made by the medical attendant on the uterus; a dose of ergot of rye, with some brandy and water was given; cloths dipped in cold water were afterwards applied to the vulva. The hæmorrhage continued; the patient looked pale, and said she felt very faint. Another dose of ergot was now given, with some more brandy and water; the patient was turned upon her back, and strong pressure continued. The hæmorrhage, "though not so much, still continued". Some strong solution of perchloride of iron having been procured, was mixed with six parts of water, an elastic tube well passed into the uterus, and rather more than half-a-pint of the perchloride mixture injected with a small Higginson's syringe. The hæmorrhage now stopped; the patient revived; the binder was re-applied; and everything considered "very comfortable". The two following days she was very well; but on the morning of the third she complained of a pain at the right side of the abdomen, which was now observed to be rather large. A dose of castor-oil was given; and ten grains of Dover's powder at bedtime. The following day, the fourth, she was better; she had slept very well during the night; was enabled to nurse the baby; took nourishment very well; the abdomen was perhaps increased in size; the pain rather less. The next day, the fifth, she was not so well; felt inwardly ill; the abdomen was more swollen; the pain was greater when she was moved in bed; pulse very quick, about 120, and small; there was "a good deal" of lochial discharge of a dark brown colour, but not offensive. The Dover's powder was repeated at bedtime. She slept pretty well during the night; and next day, the sixth, was dosing a good deal. After this, one day she appeared a little better; the next not so well. The abdomen increased in size, and became more tender to pressure; she was restless, and talked in her sleep; still took nourishment pretty well; the pulse continued very quick; skin rather dry; the bowels were moved several times, the motions being very loose and very black.

I saw her on March 28th, the fourteenth day after her confinement. She was lying on the back with the knees drawn up, the arms extended from the body. Her complexion was not muddy; the eye was only slightly dimmed. She had a flush on each cheek; was in no pain as she lay upon the back, but was obliged to keep the arms extended, as it made her uncomfortable when they were not in this position. The upper part of the arms was swollen, and tender when pressed. The abdomen was much swollen, uniform; the percussion-note was tym-

panitic, particularly over the small intestines. Her breath was rather short; she had some cough, which she had before her confinement; she did not notice any expectoration. The tongue was coated with white fur. She was very thirsty; did not care to eat; had been sick two or three times. The bowels were moved twice or thrice a day, very loose, said to be "quite of a black colour". She frequently passed wind from the bowels, not offensive. As to her urine, she did not know. The skin was slightly hot, dry; pulse 130, small, with slight wiry feel. She had no pain in the head; wished to be left alone; dosed a good deal, and, when dosing, muttered and wandered a good deal; sometimes she awoke up and seemed quite lost. A good deal of brandy and some port wine had been given, with beef-tea and gruel frequently during the day.

I suggested scruple doses of sulphate of lime, with some chloric ether and aromatics; with bags of M'Dougal's carbohc powder to be placed in the bed. I expressed the belief that the perchloride had been taken up into the system, and that death would result.

I saw her again on March 31st, the seventeenth day. She had continued to become worse. She was lying on the back, with the knees drawn up and the arms extended; she slipped down in the bed. The face was slightly flushed; skin warm and dry; the abdomen perhaps a little more swollen; when it was pressed, she cried out "Oh, dear!" She was lying in a dosing state, with much talking and wandering; was roused with difficulty, and then appeared for a time lost; sometimes she did not appear to know those around her. She took little nourishment; drank the brandy and water and beef-tea when given to her. Pulse 140, very small, somewhat wiry; breathing short, quick, with frequent sighing. Several very loose, quite black, motions were passed into the bed. A good deal of urine passed, and also into the bed.

She continued much in the same state, and during the night of April 5th, the twenty-second day, appeared to be in a deep sleep, but it was found that she was dead.

Post Mortem Examination.—The examination of the body was made in the afternoon of the second day, about thirty-six hours after death. The body was well developed, with a moderate amount of fat; some port-wine-coloured fluid issued from the mouth. There was no appearance of decomposition. The abdomen was large, prominent, tympanitic. The arms were swollen, the superficial veins very distinct near the chest, the swelling extending somewhat up both sides of the neck. The intestines were much distended with flatus; the coats were rather thin, apparently healthy. There was no unpleasant odour from the flatus when it escaped. The stomach was rather large; it contained some port-wine-coloured liquid. There was a good deal of congestion in the omentum, of a dark brown red colour; little or no congestion of the peritoneum. About a pint of brownish coloured fluid was found in the peritoneal cavity; no effusion of lymph anywhere. The uterus lay in the cavity of the pelvis, large and doughy. The uterus was removed for further examination; and, on dividing the veins at each side, some thin dark brown coloured blood escaped. The liver and kidneys were apparently healthy. There was some emphysema at the upper part of both lungs, otherwise they were healthy. There was not any particular congestion at the lower part; no fluid in the pleura. The heart was apparently healthy. There was some dark brown coloured, partially coagulated, blood in the right auricle and ventricle.

The uterus was large and doughy; it measured about five inches in length, four inches and a half across the fundus; the walls were nearly one inch in thickness. There was no injection of the peritoneum; the surface, perhaps, was not so glistening as usual; it had no lymph, or other exudation, upon it. The fimbriated extremities, and also portions of the Fallopian tubes, were of deep brown colour, from great congestion of the small vessels; the veins in the neighbourhood were of a dark brown colour, and much congested; some black coloured fluid could be pressed out of the divided veins at each side of the uterus. The body of the uterus, both anteriorly and posteriorly, was marked with leaden-coloured streaks beneath the peritoneum, passing obliquely outwards and downwards. On section of the posterior wall, several open sinuses were divided, which contained ink-black coloured fluid about the consistency of milk. The inner surface was covered with a deep brown blackish, slightly mucous, secretion, which, when washed away with a stream of water, left the tissue at the inner surface of a mottled deep brown, mixed with a blacker colour. The usual reticulated appearance of the inner layer of the contractile tissue was observed beneath this coloured layer. When placed under water, the soft tissue at the inner surface had lost nearly all the shaggy appearance it has soon after the separation of the membranes and the placenta. The former situation of the placenta was marked, as usual, by the soft tissue being thicker and in greater abundance at this part than at the other portions of the surface. Studded over the inner surface, especially at the seat of the placenta, and directly surrounding it, were numerous larger and smaller

round black spots, which, on closer examination, were found to be the open extremities of the uterine sinuses, containing an ink-black coloured fluid somewhat thicker than milk. On examination with a rather strong watchmaker's eye-glass, the situation of the placenta was seen studded with white points, which, on being transfixed with the fine point of a needle, could be drawn out a short distance, and were found to be the extremities of the utero-placental arteries. Several of these arteries were traced, and found to be immediately adherent to the tissues of the uterus; their orifices were open, their canals quite free; no trace of any coagulum were found in them. Incisions made into the walls of the uterus at and near the seat of the placenta divided several sinuses, all containing more or less of ink-black fluid similar to that previously described. Incisions through the peritoneum, across the leaden-coloured streaks, divided large sinuses filled with similar ink-black fluid. The inner surface of the sinuses was slightly stained black, but in none of them was there any appearance of coagula; at the lower part of the inner surface, some blood had been extravasated into the tissues. The orifice had a somewhat ragged appearance, but not the least evidence of any laceration. The ovaries were quite healthy; the portion of the vagina removed was also healthy.

[To be continued.]

PYÆMIA IN HOSPITAL AND PRIVATE PRACTICE.

By T. HOLMES, M.A., F.R.C.S.,
Surgeon to St. George's Hospital.

IN defending the term "hospitalism", which he has adopted from Sir J. Simpson, Mr. Erichsen naturally quotes the example of the hospital at Lincoln as showing that pyæmia may prevail in a hospital while the town is free from the disease. I was not aware that any one had ever doubted this, or that it could be necessary to invent a new term for so very old a fact. I would merely observe by the way, that the fact, if admitted, that pyæmia was prevalent in a hospital at one particular time while not prevalent in the town, does not prove that at another time it might not be absent from the hospital while prevailing in the town. It does not, in fact, prove that the disease is in any proper sense a hospital disease, and still less if the hospital be known to be faulty in construction. Every one knows and must admit that, as a hospital is intended for the treatment of considerable numbers of the graver cases of injury and disease, the results of errors in the construction of such places are likely to be of a very serious nature. This consideration was little attended to in old times (and the greater part of the Lincoln Hospital was built about a century ago), and hence many of our older hospitals are very defective in construction; and for many of them, I have no doubt, entire demolition and reconstruction would be necessary, if it were proposed to use them for the purpose of treating cases of serious injury or operation in anything like the proportion in which such cases are found in our great metropolitan hospitals. The defective construction of the hospital in question has led to an unhealthy condition, on which I dwell many years ago in the joint report on the hospitals of the United Kingdom (*Sixth Report of the Medical Officer to the Privy Council for 1863*, p. 655), written by Dr. Bristowe and myself. I have there pointed out obvious and confessed defects of construction and of drainage, which had produced previous outbreaks of erysipelas, phagedæna, and pyæmia, in one of which it became necessary to close the hospital for some months. Improvements were made in the drainage, the wards were altered and enlarged, and other minor alterations were made; but it has been found impossible to remedy the original faults in the construction of the hospital. Last year, Dr. Bristowe was requested to visit the place, and to make a thorough examination of the hospital and its site; and, in consequence of that examination, recommended the entire reconstruction of the building. Sir J. Paget and Mr. Erichsen, while at different times they were attending to a professional summons to the town, were asked to look at the hospital, and also gave their opinions, though necessarily more hastily; and Captain Douglas Galton also surveyed the building, and gave suggestions for its alteration or partial reconstruction. The surgeons who had practised in the hospital, and whose operating practice appears now to be considerably more active than it would have been when the hospital was constructed, were unanimous in recommending the entire reconstruction of the building, which, indeed, was obviously unfit for the purposes of an active surgical hospital, and, in fact, was probably never intended for such purposes. The governors of the hospital came to the very sensible conclusion that, as they had already spent a good deal of money in alterations without curing the mischief, as the alterations which Captain Douglas Galton or those which Mr. Erichsen suggested were very costly, and their result appeared uncertain, they would build an entirely new hospital. I