their height, she could not breathe, owing to the firm closure of those parts. She struggled hard, and turned blue in the face. They came on whenever she dropped asleep or lay down; also whenever she attempted to expectorate the mucus which collected in the air-passages, and gave great trouble. As she was decidedly getting worse, in spite of the various means adopted to relieve her, I determined to try the effect of opening the trachea, which would at any rate remove the apprehension of choking, and might afford a more easy outlet for the accumulating mucus. This was done on the 21st, while she was under the influence of chloroform. Rather a severe spasm came on when she was recovering from the anæsthetic state. After this, there was no return for four hours. Previously to the operation, the intervals between the spasms had not exceeded a quarter of an hour. When they returned, they were less frequent, less severe, and unattended with difficulty of breathing. A good deal of mucus was voided through the tube. On the whole, she was more comfortable, had some sleep, and took a pint of beef-tea, besides wine and arrow-root.

Soon the spasms returned with their former frequency; the progressive loss of strength continued; and the crepitations in the trachea, bronchi, and smaller air-tubes, with shortness of breath, indicated that disease was going on in the lungs. To meet these symptoms, acetum canth. and blisters were applied, to no purpose. She died on the 23rd. We found general congestion of the lungs, with circumscribed spots of solidification and interstitial suppuration. In one place was a collection of dirty turbid pus. There was also yellowish dry lymph upon the surface of the pleura on one side. No appreciable disease of the nervous centres was present.

REMARKS. The operation did about as much as was to be expected in this case, by divesting the spasms of their most distressing feature—the stoppage of the breath; and had it been resorted to earlier, its good effects might have been more decided. There is no doubt that in tetanus and other allied affections the immediate cause of death is sometimes the suspension of respiration, by the spasmodic closure of the larynx. I have seen a tetanic patient die in this way. An opening in the trachea may, for a while, avert this result in some cases, may render swallowing less difficult, and afford a little longer time for the trial of other remedies. But no more than this is to be expected; and it must be a question whether for this it is worth while to subject the patient to the operation, even under chloroform. If we had surer means of combating the complaint, there would be some encouragement to adopt this proceeding, with the view of endeavouring to extend the patient's life, and give them a better chance of acting.

In this case I observed a circumstance, which is noticed in the lecture by Dr. Trousseau, above referred to,—viz., that the liquids which the patient took into the mouth passed through the glottis and escaped at the opening in the trachea, through and beside the canula. I then thought it depended upon some peculiarity in the patient or the nature of her malady; but that physician and Dr. Archambault have noticed it in several cases, and believe that it has often been the cause of death after tracheotomy. They attribute it to the patient's having, in consequence of breathing through the canula, lost the habit of freely using those muscles which serve for the occlusion of the larynx, and those which push the food into the œsophagus. To meet the difficulty they forbid liquid food, giving thick soup, etc., and suggest the momentary closing of the canula with the finger whilst the patient swallows.

After writing the above, I received from a very intelligent surgeon in this neighbourhood a larynx with inflammation of the mucous membrane, and superficial ulceration, accompanied by the following history, which I give, with his permission, as it illustrates in a remarkable manner the danger of delay in such cases:—

"A man, fifty years of age, very active, healthy, and strictly temperate, attended his meeting three times on

Sunday last, ate his supper as usual, and went to bed in perfect health. He awoke in the night, was chilly, and afterwards slightly feverish, but complained very much of his throat, with difficulty of breathing. He again slept until four or five in the morning. At six he jumped suddenly out of bed, apparently nearly suffocated. I saw him in about twenty minutes in bed, breathing with difficulty; the fauces looked slightly inflamed; no cough; pulse perfectly quiet. In fact, he said he felt perfectly well, with the exception of tightness over and below the thyroid cartilage. I should say the breathing was stridulous or croupy, and some degree of hoarseness. I looked upon it as a case of laryngitis, gave tartar emetic, which emptied the stomach, applied spirit of turpentine to the front of the throat, and ordered two grains of calomel to be taken every hour; at ten I saw him again, found him much the same, or perhaps a little better; an abundance of viscid sputa about the fauces; at twelve, after talking with his friends, he was again seized with an attack similar to the one at six, called out for air, and died in a few minutes—about a quarter of an hour before I could get to the house, or I would have opened the larynx. Ought I not to have done so earlier?"

CITY DISPENSARY.

CASES ILLUSTRATING THE PHYSICAL SIGNS OF INSUFFICIENCY OF THE AORTIC VALVES.

By JOHN COCKLE, A.M., M.D., F.R.A.S., Member of the Royal College of Physicians, Physician to the Dispensary, etc.

STRUCTURAL alterations of the valvular apparatus of the heart vary both with respect to the amount of implication of the muscular tissue of the organ and the existing symptoms, as they occur at different periods of life, and under the influence of exciting causes of greater or less intensity. Thus, for example, up to the completion of the first half of life there probably exists a greater proclivity to active inflammatory excitement of the pericardial and endocardial structures; and the chambers of the heart become ordinarily increased in bulk and capacity, one or both, as a consequence of the irritation and subsequent paralysis of the contractile fibre induced by such inflammation spreading over a large surface, and very frequently persisting in a subacute form. During the second period of existence, on the other hand, the pathological changes are usually simply those of perverted nutrition, consisting of thickening of the endocardium, or are limited to the induration or calcification of a single valve or its neighbourhood, and characterised, unless such change be extreme, rather by an absence of subjective phenomena than by any active signs of cardiac irritation or hypertrophy. This activity or latency of the symptoms of valvular disease, as occurring at different phases of life, was well pointed out by Bichat (*Anatomie Générale*, tome ii, p. 55).

The following cases are offered as illustrations of the distinction adverted to, with respect to the aortic valves, as also of the direction of the murmur which revealed the change in question.

CASE I. *Insufficiency of the Aortic and Mitral Valves: Dilated Hypertrophy of the Heart: Emphysema of the Right Lung.* Charles Pipe, aged 29 years, admitted Dec. 6th, 1855. He had rheumatic fever two years ago. Since which attack, he has suffered from palpitation of the heart and occasional dyspnoea. At the present time, in addition to these symptoms, he complains of pain over the upper sternal region and in the left shoulder, attended with a frequently recurring sensation, as of cold water trickling down the back, constant sense of dyspnoea, and dry cough. His ankles are swollen; urine clear and copious; his appetite is good, and he sleeps well.

Inspection. Face anxious and somewhat pale; nares rather dilated; conjunctivæ injected; slight distension of jugular veins; no abnormal pulsation of any of the super-

facial arteries. Chest bombed upon right side posteriorly; sternum elevated. Heart's impulse visible in epigastrium, and over the fifth, sixth, and seventh left ribs, as far as an inch external to the nipple. No obvious præcordial *voissure*.

Palpitation. Heart's impulse considerably increased over the points stated; slight *frémissement*; radial pulse, small, but moderately regular.

Percussion. Sound abnormally full over right lung, anteriorly and posteriorly; area of heart's dullness at least three square inches.

Auscultation. Right lung partially emphysematous; heart's sounds replaced at base by well marked *bruit de va et vient*, very superficial and acutely hissing in character. This bruit, diminishing in intensity, is conducted up the aorta nearly to the carotids, in which latter situation the second normal sound of the heart is lost. The murmur is distinctly audible over the right anterior surface of the chest, but gradually changes towards the right axilla for the normal *tic-tac*. The second sound of the pulmonary artery at the second intercostal space is masked by the murmur, which latter is also audible over the left anterior surface. From the base of the heart the double murmur is conducted vertically downwards to the epigastrium, and obliquely to the apex, with an increasing intensity; but towards the inferior part of the left axilla, the systolic bruit alone is audible, and extends with a well defined character, though diminishing in intensity, into the posterior scapular region. Distant murmur is also audible at the left superior interscapular region.

CASE II. Marked Insufficiency of Aortic Valves: Dilated Hypertrophy of the Heart. Mary Sparkes, aged 20 years, married, admitted July 30th, 1855, has been very much indisposed for nine months. At present, complains of pain over the lower sternal region; cough, with expectoration of white mucus; debility, emaciation, night sweats, occasional hæmoptysis. Lies easiest upon the right side. Menstruation normal. Her father died from palpitation of the heart. No family disposition to consumption.

Inspection. Face anxious and extremely sallow; chest symmetric; violent pulsation of all the superficial arteries; visible impulse of heart much increased.

Palpation. Pulse collapsing, regular; cardiac impulse increased, *frémissement* over cardiac region.

Percussion. Heart's area greatly enlarged.

Auscultation. Unusually marked double murmur (*bruit de scie en long*) having its maximum at the heart's base, and transmitted with great intensity to the apex, but is quite lost behind. The murmur is audible in the carotids, replacing the second normal sound. At the second right intercostal space, the second pulmonary sound is completely masked. I never remember to have heard the double sawing murmur so distinctly marked.

This interesting case has been of late lost sight of, so that some other important points of physical diagnosis are unavoidably omitted.

CASE III. Insufficiency of the Aortic Valves: Dilated Hypertrophy of the Heart. David Billingham, aged 19 years, admitted Jan. 14th, 1856, law-writer; pale complexion; puffiness under eyes; expression anxious. Six years ago, had a fever, but does not know its nature. Twelve months ago, was in St. Bartholomew's Hospital for some abdominal affection. At present, complains of much pain at his heart and right side of chest during inspiration, corresponding to about the third costal cartilage; very harassing cough, with considerable expectoration, and preventing sleep at night. Otherwise, can lie down without distress, and is not much disturbed by dreams. The urine is not albuminous.

Inspection. Face pale, and of anxious expression; puffiness under eyelids; slight *ovassure* over fifth and sixth left cartilages. The right nipple is situated on a level with the fourth rib; the left, between the third and fourth ribs. Heart's impulse visible over an area of nearly four square inches, extending below the sixth rib. No abnormal pulsation of superficial arteries. Pulse regular, full, and, with

the exception of slight jerk, nearly natural in both radials.

Palpation. Heart's impulse felt over the space named; absence of *frémissement*.

Percussion. Heart's area much increased, extending below the sixth rib; but this point nearly corresponds with right wing of diaphragm, which is unusually low. At the third right costal cartilage, percussion develops *tintement métallique*.

Auscultation. A diastolic murmur, having its maximum about the inferior border of third rib, is distinctly audible. Here the first sound is very obscure—a mere concussion of the ear. The murmur ascends the aorta, and at the aortic cartilage entirely replaces the second normal sound. The first sound here is faint and dull. The murmur is but indistinctly audible in the carotids. The second sound of the pulmonary artery is completely masked by the transmitted murmur from the aortic orifice. This murmur is audible over all the right and left anterior surfaces of the chest. At the apex, the diastolic murmur is yet audible, and gradually changes at the left axillary region into a short distant whiff. It is also distinctly audible in epigastrium, and, for the space of two inches below this point, distinctly masks the second normal sound. Posteriorly, the heart's sounds are indistinct, with the exception of the lower scapular region, near the spine; there, there is distant, but apparently normal *tic-tac*.

CASE IV. Insufficiency of Aortic Valves. Martha Wells, aged 47 years, admitted Nov. 7th, 1855, has had two attacks of rheumatic fever: the first occurred twenty-two years ago; the second, six years ago. This last attack confined her six months to her bedroom. It was supposed that the heart was implicated in both these attacks. She now complains of dyspnoea upon exertion, with uneasiness in the præcordial region. Occasionally she is troubled with cough. No other symptoms of importance are mentioned.

Inspection. This patient is exceedingly stout; her complexion is florid, but healthy.

Palpation. Heart's apex *in situ*, without abnormal impulse. No *frémissement*. No pulsation of superficial arteries; radial pulse regular, soft, without either collapse or hammering.

Auscultation. Over the base of heart, well-marked double murmur, ascending the aorta, passing downwards to the epigastrium, and obliquely to the apex, but in the two latter directions with greatly diminished intensity. The second sound of pulmonary artery is masked by the transmitted murmur. It is difficult to appreciate the character of the sounds in the carotid arteries.

CASE V. Insufficiency of Aortic Valves. William Collard, aged 46 years, admitted August 7th, 1855. Complaints of pain and uneasiness over the heart; pains in right arm and side, occasionally in the left; great difficulty of breathing; cough, with rather copious expectoration; the ankles swell occasionally; rather severe lumbar pain; irritable bladder; urine slightly turbid by heat and nitric acid; specific gravity 1020; legs are covered with a considerable number of petechiæ.

Inspection. No abnormal impulse of heart; apex *in situ*. Marked pulsation of all the superficial arteries.

Palpation. No abnormal impulse of heart, or *frémissement*; superficial arteries pulsating without thrill; radial pulse, soft and regular, with marked collapsing character.

Auscultation. Double murmur, of a musical character, and acutely hissing with its maximum at the heart's base, ascending upwards into the aorta and both carotids, replacing totally the second normal sound. This murmur is audible over the sternal region of right side, but is gradually replaced at far right by normal *tic-tac*. It is transmitted vertically downwards, with diminished intensity, into the epigastrium. Upon the left side, at the second intercostal space, the transmitted bruit masks the second normal sound of the pulmonary artery, and extends over left anterior surface. The sound is also transmitted obliquely to the apex, axillary, and inferior scapular region; but, in

both these regions, it is very slightly audible, and seems clearly to be the murmur originated at the base.

CASE VI. Insufficiency of the Aortic Valves: Dilatation of the Aorta: Degeneration of the Heart: Musical Diastolic Murmur. Charles Markham, aged 56 years, labourer, admitted June 7th, 1855. He attributes his symptoms to internal injury, occasioned by lifting heavy sacks of flour. Complains of pain and beating in the head, eye, and ear, epistaxis, pain in the chest, some dyspnoea, and cough. Sleep disturbed by dreams. Lumbar pains. Urine normal in colour, and rather less than usual in quantity; specific gravity 1025; affords no indication of albumen by heat, but is intensely reddened by nitric acid. Never had rheumatic fever.

Inspection. Short and stoutly built; deep circumscribed redness of cheeks, bounded by sallow tint, watery eye, melancholic expression. Chest broad and symmetric; very marked beating of all the superficial arteries—carotid, temporal, subclavian, brachial, radial—but no visible impulse of the heart. Moderate venous cervical and brachial distension. Respiration tranquil.

Palpation. Apex *in situ*, fifth and sixth ribs; impulse very weak. Absence of *frémissement* over cardiac region, but marked thrill in all the arteries named; pulse 80; regular, full, and hammering; no marked retardation in the pulse stroke, compared with the heart's contraction as ascertained by auscultation.

Percussion. Pulmonary sound nearly normal. Heart's area perhaps increased. Extreme dullness upon percussion from base of head throughout the entire remaining length of sternum, attended with very marked sensation of tactile resistance.

Auscultation. At the base of the heart the systolic sound is nearly extinct; a very loud, prolonged, highly musical, extremely superficial, and acutely hissing diastole murmur being alone audible. Upon first listening, and before feeling the radial pulse, it is excessively difficult to determine whether this murmur be systolic or diastolic, so perfectly does the natural order appear to be perverted. The murmur, at this site, has its maximum point of intensity, and entirely absorbs the first sound and the intervals of silence. Upon moving the stethoscope from this spot, the murmur loses its very superficial hissing element, and retains its simply musical character. It is audible over the entire anterior surface of the chest, and with nearly equal intensity. In the carotids the first sound is marked by a short hoarse murmur; the second sound is intensely musical. The second sound of the pulmonary artery at the pulmonic cartilage is completely masked by the musical murmur; but at the aortic and pulmonic cartilages, respectively, the first sound again commences to be audible. The murmur is also conducted vertically downwards *in epigastrio*, and from this point to within one inch of the umbilicus. At the apex of the heart the first sound is heard, as a smart flip, with tolerable distinctness, the musical murmur immediately succeeding and occupying the entire period of the long silence. Posteriorly, the murmur is heard, with nearly equal intensity, over the entire surface, and passing entirely down the vertebral column, sounding rather louder at its dorsal division. The first sound is heard very loud and abrupt during the diastole of the brachial and femoral arteries; the second sound is absent in these vessels, but is heard musical in the subclavians.

Lungs. The inspiratory murmur is tolerably pure anteriorly and posteriorly; at the left base, expiratory blowing murmur exists, which character is absent at the same locality upon the right side. The respiration is tranquil.

CASE VII. Insufficiency of Aortic Valves: Emphysema: Peripheral Paralysis. Joseph Marshall, aged 53 years, admitted Jan. 17th, 1856, has been more than ordinarily ill upwards of two months. At the present time complains of cough with watery expectoration, wheezing, dyspnoea, disturbed sleep, frightful dreams with sudden starting. Has felt for the last four years a gradually increasing loss of power of his limbs. This state commenced with numbness

in his fingers, which gradually increases. Frequently things will slip out of his hands without his being conscious of the occurrence. His feet are affected with similar loss of power, though in a less degree. No marked cerebral symptoms exist.

Inspection. Chest slightly bombed posteriorly. The lungs are lowered in position. Heart's impulse *in situ*, slight. Slight visible pulsation of subclavians.

Palpation. No marked impulse of heart. Absence of purring tremor. Pulse very thrilling and collapsing. On each occasion of feeling the radial pulse, the hand is gradually drawn up by spasm, which instantly ceases on removing the pressure.

Percussion. Heart's area not apparently increased, but masked by emphysematous lung. Pulmonary sound clearer than natural in places.

Auscultation. Anteriorly, breathing superficial with slight sibilus. Posteriorly, sibilus with prolonged expiratory murmur. Systolic sound dull. A diastolic murmur at base, whiffing and roughened, replaces entirely second sound and masks second pulmonary sound still more distinctly than the aortic. This murmur ascends up the aorta. Second sound in carotids obscure. At the apex, both sounds indistinct. The murmur is not transmitted either to right or left beyond the points indicated, being apparently damped by the emphysematous lung, but is audible *in epigastrio*. Heart's sounds very indistinct posteriorly.

CASE VIII. Insufficiency of the Aortic Valves. Thomas Neill, aged 43 years, admitted January the 28th, 1856. Tall, thin, pale, but well proportioned; formerly served in the army for ten years. Subsequently a groom, at present a small shopkeeper. Has always had excellent health until six months ago, when his present symptoms gradually commenced, viz., frequent paroxysms of pain and swelling in the neighbourhood of the sigmoid flexure of the colon darting through to the loins, which symptoms have for the last fortnight been permanent. He now feels weak and nervous. Urine normal in quantity and colour. Specific gravity, .18; slightly hazy, but cleared and reddened by nitric acid. He has never had rheumatic fever, or the slightest symptom referable to the chest. The heart was auscultated on the supposition that the aortic valves would be found patent from the markedly collapsing character of the pulse.

Inspection. Chest well shaped, symmetric; no visible apex beat *in situ*, but gentle impulse movement *in epigastrio*. Swelling over the sigmoid flexure.

Palpation. Impulse of heart only felt upon pressure, then slight and natural; absence of *frémissement*; no abnormal pulsation of superficial arteries; pulse full and collapsing; slight episternal pulsation.

Percussion. Chest sound good; area of heart normal.

Auscultation. Respiration tranquil; murmur rather weak, but natural. **Heart.**—Systolic sound somewhat muffled at apex, but tolerably distinct at both aortic and pulmonary cartilages. Diastolic sound entirely replaced by a soft, prolonged, blowing murmur, having its maximum at the inferior border of third cartilage ascending up the aorta into the carotids; most audible in the left carotid, but without thrill. The murmur covers the second sound of the pulmonary artery at the second intercostal space, but is of a somewhat softer character than at the aortic valves. It is audible over the right and left anterior surfaces of the chest, on right side to line of axilla, upon left not farther than pulmonary valves, and also *in epigastrio*: then also masking the second sound of the heart. Obliquely, it is conducted from the base to the apex, where it is gradually lost; the normal second sound is here inaudible. The murmur is absent at the posterior surface of the chest, but faint traces of the heart sounds exist down the spine, and at superior scapular border.

CASE IX. Insufficiency of the Aortic Valves: Extensive Emphysema. James Claridge, aged 60 years, admitted January 31st, 1856. Has been subject to winter cough. He now complains of dyspnoea, wheezing, and cough; scanty urine; flatulence. Loses the proper use of his

limbs after fast walking. Has never had rheumatic fever. His father was asthmatic.

Inspection. Chest anteriorly tolerably symmetric; comparative depression of right supra-clavicular space; very slight visible impulse *in situ*, and a little to the outer line of the nipple. Impulse distinct *in epigastrio*; distension of brachial and cervical veins, the latter rapidly distend on downward pressure, but empty to a certain extent during inspiration. No abnormal pulsation of superficial arteries. Bombing of the chest posteriorly.

Palpation. Distinct impulse *in epigastrio*; no *frémissement*. Pulse full, soft, and regular.

Percussion. Pulmonary sound abnormally full; lungs lower than natural; area of heart difficult to appreciate accurately from the encroachment of the lung.

Auscultation. At the base of the heart, a diastolic murmur is heard, of maximum intensity, short, hoarse, exactly resembling the crumpling of parchment. The murmur ascends the aorta, and is audible in the carotids, most distinct in the left; it entirely replaces the second sound of the pulmonary artery. The first sound is distinct at both cartilages. From the base, this parchment-like diastolic sound is conducted vertically downwards to the epigastrium with considerable intensity; but in this region both the first and second sounds acquire the character of friction sounds—hoarse whiffing. This murmur is audible over all the right anterior surface of the chest, and over the left as far as the axilla; it is also transmitted obliquely to the apex, where it is gradually lost towards the inferior axillary region; here both sounds have a slight character of murmur.

Lungs. Occasional inspiratory *rôle sonore* and snoring expiratory murmur; *rôle muqueux à grosses bulles* during expiration at the bases.

[To be continued.]

Original Communications.

CASES IN MIDWIFERY.

By THOMAS RADFORD, M.D., F.R.C.P. Edin., etc., Consulting Physician to St. Mary's Hospital, Manchester.

[Continued from page 126.]

CASE X. January 2nd, 1823, Mrs. Fildes, midwife, sent for me to visit a hospital patient residing in Cock Gates, in labour and flooding. She was at the end of pregnancy, and in going up stairs had fallen, and immediately felt sick and faintish. In about an hour afterwards, she had a discharge of blood, followed by pains, which continued to increase in frequency and strength. The hæmorrhage was now great; her countenance was very pale; her pulse was frequent and feeble. On an examination *per vaginam*, I found the os uteri opened to about the size of a shilling; but it was firm. On passing the finger through it, I detected the placenta. I plugged the vagina, and had the abdominal bandage put on, with the uterine compress placed under it, and then tightened, so as to effectually support the womb; the retaining bandage was also applied. She was carefully watched for some time; and as there was no external bleeding, or indication of any internal loss, I left her in the care of her midwife, strictly directing her to send again for me if there were any grounds for alarm.

In about four hours I called, and found the pains recurring more frequently and stronger. There had been no bleeding, and she seemed much better. I now withdrew the plug, and ascertained that the os uteri was considerably dilated, and softer, and the loosened placenta lying within it. There was some bleeding during the pains. After having placed on the regulating bandage, I passed the hand, and further detached the placenta, to such an extent as I thought would allow the head of the child to

pass, and then ruptured the membranes, directing the midwife at the same time to tighten the bandage. The water freely escaped; and in a short time the head of the child began to press on the os uteri, which soon yielded. The loosened portion of the placenta fell to one side, and the child passed by it, and in about three hours it was born alive. The placenta followed in about half an hour. There was no further hæmorrhage, and her recovery was uninterrupted. A drachm of laudanum was given.

REMARKS. This case is another example of the value of the plug. A very short time elapsed between the accident and the occurrence of labour pain. The location of the placenta on the cervix and os uteri tended to produce these effects sooner than if this organ had been situated elsewhere. The irritation which the os sustained by the mechanical separation of the placenta was soon felt by the fundus and body of the uterus. The hæmorrhage was brought on by the fall; but sooner or later flooding would doubtless have occurred, if no such accident had happened.

CASE XI. May 5th, 1827, I visited a hospital patient residing in Cook Street, Salford, under Mrs. Booth's care, who was stated to be in labour, and in danger from flooding. She was in the last month of her seventh pregnancy. The pains were frequent and sharp; she felt faintish; looked pale; and her pulse was feeble. The discharge of blood had continued for three hours, and was now excessive, and increased on the accession of each pain. She had a slight attack a month before, which was soon suppressed by rest, cool air, and cold external applications. The os uteri was now dilated to the size of a shilling, but extremely rigid: it had the feel of a cartilaginous ring. I passed my finger through it, and I thought I perceived the placenta. Under these circumstances, I determined to effectually plug the vagina, to place on the abdominal bandage, and under it the uterine compress, and to fix the retaining bandage. She was carefully watched for some time, and feeling assured she was safe, I left her, having directed the midwife to send for me if any unfavourable symptom occurred.

In about six hours I was sent for, as the pains were now very frequent and strong. She was much improved in appearance, and her pulse was firmer. There had not been the slightest bleeding. On withdrawing the sponge, some small coagula followed, and immediately afterwards there was a fresh flow of blood. The os uteri was now opened fully to the size of a crown-piece, and felt considerably softer, and, as I thought, dilatable. A portion of the placenta with the membranes were found, in the absence of the pain, within it; and above I could feel the head of the child. As the uterus was now acting well, after having had placed on the regulating bandage, I passed my hand onward to the side where the membranes offered, and having first freely detached a sufficient extent of the placenta to allow the head to pass, I then ruptured them. The bandage was kept so tight as constantly to compress the uterus, as it changed in size by the escape of the waters. The pains were very strong; and the head of the child soon engaged within the os uteri, pushing the placenta aside as it descended into the pelvis. The child was born alive. The placenta was found lying loose in the vagina, and withdrawn. A drachm of tinctura opii was administered; and the circular bandage and uterine compress were applied.

REMARKS. No other means would have answered in this case so well as the plug; blood was saved and time obtained for the os uteri to soften and dilate; in fact, no other plan could have been safely adopted. If the membranes had been ruptured (which might assuredly have been done by means of a stilette), the hazards of protraction would have been very great with the os uteri so hard; and the child to a certainty would have been destroyed by the contusion and the laceration which the placenta must sustain from the pressure of its head on so unyielding a tissue. To prevent such an injurious effect on the placental structure, is one object in my practice of detaching