tined, and I ordered a small portion of the following oint-
ment to be rubbed in over the seat of pain, night and
morning.
\[ R \] Unguenti hydragryi fortiss., unguentum camphor., \&c. 3 drops; N. Potass. iodid. 1 gr. iv. June 5th.

June 6th. (Her sister was married on this day.) She had a
violent hysterical attack, which gave way to the
usual remedies, quiet, and opium. Pulse 96; rather better in
character, but still feeble. The ointment was ordered to be
continued.

June 9th. Pain diminished; she was able to sit in a
chair comfortably for the first time.

June 13th. She had a slight hysterical attack, for an
hour, which subsided without medical interference.

June 20th. The abdominal pain had materially abated,
indeed was not perceptible, except on pressure over the
part. Her appetite had been failing for the last two or
three days, and she complained of a feeling of heat at the
stomach. Continue the ointment.

\[ R \] Potassm bicarb. 5ij; acidi citri 3iss; acidi hydro-
cyanici diluti 43iij; aquae destillati ad 3yiij. Fial mist.
Cap. 3ij ter quodie.

June 30th. She was now entirely free from pain; her
general health improved; appetite good, and she had no
bad symptom of any kind. She had no return of hysteria
since the 13th.

Remarks. The above case presents no features op-
posed to the views which I advanced in my last paper con-
cerning the etiology of hysteria, that a peculiar condition
of the nervous system is a predisposing cause, and that
the ovarian lesion is very frequently an exciting cause.
This patient had never observed any irregularity in the ovario-
uterine system, and she had not been habitually liable to
hysteria. She had once had an attack of this nature, and
it is not unreasonable to suppose that, synchronous with
this, at the age of puberty, or soon after, there may have
been some slight disorder of the generative system, which
had escaped her notice. On the present occasion, we find
her suffering from both ailments, and the one disappearing
simultaneously with the other. The immediate cause of the
ovarian inflammation remains a question. It was not impro-
ably owing either directly to the accident before mentioned,
or indirectly to the enteric affection in the neighbourhood.

Though the ovarian lesion had probably existed for several
weeks, a hysterical attack did not take place until the mar-
rriage of her sister, which, occasioning her considerable excite-
ment, disturbed the whole nervous system. As regards the
number of such cases, I have found leeches, and the milder
preparations of mercury, to be among the most effi-
cacious, and I find that the latter is seldom required to be
used so far as to affect the gums. In this case, leeches were
not applied, as there had been a sufficient drain upon the
interacting system at the time of the confinement.
The sanguineous and nervous systems were well balanced;
but if there were any tendency to an abnormal state, it
would be to the hyperemic condition.

CASES OF LITHOTOMY.

By \textsc{William Thomas Bell}, Esq., Great Grimsby.

\textbf{CASE I. Lithotomy: Rapid Recovery.} Charles Pearson,
age 5, a widow's son, of fair complexion, light hair,
blue eyes, and healthy appearance, came under my care in
November 1855. He had suffered for twelve months from
symptoms of stone, varying in intensity, with occasional
difficulty in passing urine, and voiding it more frequently
than natural, with pain at the end of the penis, which
caused him to pull the prepuce. When passing his urine,
he would sit down to stool, at the same time, pro-
ducing prolapus ani. During the last two months, his
symptoms had kept increasing; he could not hold his
water for long at a time. His urine was clear, and he
passed no blood. His general health was very good.
A sound was introduced into the bladder, but I could not de-
tect a stone. He kicked about much; and the bladder
would not tolerate any water to be injected. A few days
afterwards, under chloroform, I cut him up, and readied a
stone. As his mother was not in a good state of health,
the operation was postponed for a time. In this
interval, he took carbonte of soda and tincture of hae-
bane, with mugilce; and kept his bowels open with
castor oil.

Jan. 13th, 1856. Under chloroform, I performed the
lateral operation of lithotomy. There was no bleeding.
The calculus was of about the size of a bean, long,
and soft, and would scarcely bear the forceps. Afterward an
opiate was given. During the night, he passed his urine
by the urethra, and freely by the wound. At night,
another opiate was given.

Jan. 14th. He slept well during the night; urine con-
tinued to pass as above. There was slight fever. I
ordered a saline draught every four hours; and a powder,
with calomel and Dover's powder, at bedtime.

Jan. 15th. Doing very well.

Jan. 16th. The bowels were not moved. I ordered a
dose of castor oil. Urine passed freely by the urethra,
and very little through the wound. The saline was continued.

Jan. 17th. Going on very well. I ordered him a better
diet, and to leave off the saline.

In three weeks he was perfectly cured.

\textbf{CASE II. Lithotomy.} James Lingard, aged 63 years,
labourer, of short stature, much care-worn, came under my
care in July 1855, with stone in the bladder. He had
always enjoyed good health up to three years ago.

\textit{History of Disease.} Thirty years ago, he passed a
quantity of lithic acid sand; and three years ago he passed a
small calculus without much difficulty; and ever since this
had been getting worse, and for the last year had been in-
capacitated from work.

The symptoms were those usual to stone in the bladder.
There was a considerable deposit of mucus in the bladder
upon standing. I sounded him, and found a stone of large
size, measuring 14 of Ferguson's lithiocrate. There was
considerable enlargement of the prostate gland. He was
anxious to have the stone crushed; but, taking into consi-
deration the irritability of the patient, the hardness of
the stone, and the enlargement of the prostate gland, with an
assurance that he would not keep in bed for any length of
time, I determined to perform the lateral operation of
lithotomy.

July 2nd. Under chloroform, I performed lithotomy.
The operation lasted two and a half minutes. There was
rather free hemorrhage at the time of the operation, and the
veins of the prostate. To arrest this, I plugged the wound with
sponge, and put an elastic catheter into the bladder; brought the
kneels together, and gave an opiate.

The after treatment consisted in low diet for a few days,
with salines; then a good generous diet, with porter, and
tobacco to smoke at dictum. He made a good recovery,
and walked to my surgery, a distance of a hundred yards,
three days within the month after the operation, although
the wound was not quite healed. In a few days after this,
he went home, a distance of eight miles; and I lost sight of
him for a few days. Some time after the operation, a small
fistulous opening remained in the perineum, but he refused
to have anything done for its relief.

The calculus was flat, and of the circumference of a full
sized walnut, composed of distinct laminae, and very hard.

\textbf{CASE OF PLURAL BIRTH.}

By \textsc{B. Coker N. Daviei}, Esq., Rye, Sussex.

On the morning of December 14th, 1855, I was
summoned to the union house, to attend — M., aged 19 years,
single. On arrival, I found her to be in labor, the
membranes had broken, and she pressed. The child
was soon born; and after waiting a little time, and making

---

\textcopyright 1856 by the Medical Journal. Published by the British Medical Association. All rights reserved.
ON THE MURMURS OF THE HEART AND GREAT VESSELS.

By R. HUTCHINSON POWELL, M.D. Lond., Physician to the Royal Infirmary for Diseases of the Chest.

(Concluded from page 107.)

The preceding statements show, at all events, that we have still to discuss the first principles of cardiac action, and conclude mere dogmatizing, as opposed to observation. If it is true that the impulse of the heart and the arterial pulse are not iso-chronous, even allowing for the fractional moment consumed in overcoming vascular elasticity, also for the retarding effect of regurgitant disease, it will be necessary to re-state and re-arrange the respective movements and sounds as regards diagnosis. Thus, in obstruction valvular (mitral) disease, cardiac murmur will not coincide with ventricular contraction, but with dilatation and impulse. The relation held to exist between impulse, first sound, systole, and pulse, becomes necessarily disjointed; the two former points being first, the two latter next, and the second sound last, in order. As regards the causation of the heart's sounds, any person may convince oneself of their very simple character — being rather tactile shocks, perceptible to the ear, than true acoustic sounds — by tapping the palm when covering the ear, which very closely simulates them, especially the first sound. Much of the obscurity in question may be ultimately cleared up by attending to circumstances connected with cardiac phenomena, when disease results in the walls, orifices, or valves of the heart. This leads us to advert to the mode of production of cardiac murmurs, and I may here call attention to the correspondence, if not agreement, existing between the opinions broached by Dr. Corrigan and the deductions of Professor Kiwich. A quotation from Volkman will again assist us.

It will be observed that the pressure is regulated by proximity to, or distance from the heart, also by the diameter of the tube, and determinate friction of the contained fluid. The undulatory movement in the vessels somewhat resembles that described by Skoda in the exposed infant's heart. It follows, moreover, that the proclivity to the production of murmurs in the circulatory system is influenced in a corresponding degree, as above referred to.

"The laws regulating the movement of the blood, in the living organism, are identical with those determining the movement of fluids in artificial tubes; the logical element being the same in both. The lateral pressure results from the adhesion and friction occurring between the liquid and the parietes of the tubes. This lateral pressure, at any one point of the tube, being proportional to the resistance to be overcome by the movement of the water (or other fluid) at this point."

"The lateral pressure, exerted at different points of a tube of unequal dimensions, it inversely as their distance from the discharging orifice; the ratio of the length of the tube to the lateral pressure appears constant; but the lateral pressure is almost inversely as the diameter of the tube: yet this pressure increases as the width diminishes, the pressure not being uniform throughout the arterial system, as asserted by Poiseuille."

"The pressure of the blood is subject to a gradual diminution from the commencement of the arterial to the termination of the venous portion, equal to those between its two ends; the pressure is equal to it varies in proportion to the distance of the tube from the central point, to suffer varying degrees of pressure, which is increased in parts through which the blood passes with difficulty; the capillaries, occupying an intermediate position, suffer over half the maximum near the heart."

To distension of a tube, caused by intermittent injections, succeed contraction, dependent upon its elasticity; both movements do not take place simultaneously throughout, but by undulations from one end to the other; this wave-like motion being essential to the formation of a current.

"The blood pressure is equal to one quarter of that of the atmosphere, varying with the distance of the tubes (arterial, capillary, or venous) from the point of departure, and with the species of animals; the variation ranging from a third to an integer number in mammals."

"Warm-blooded animals possess a greater arterial pressure than the cold-blooded, being lowest in early and advanced, and highest in the prime of life, and not being in proportion to the size of the animal."

"The velocity of the blood-current (as distinguished from the space traversed by a blood particle) is considered considerably greater in the arteries than that in the capillaries; being at a maximum in those in propinquity with the heart, but not being identical in the analogous vessels of different animals, yet not varying more than in animals of the same species; the mean velocity in the carotids of mammals being about twelve inches per second." I next subjoin a resume of Kiwich's deductions; which, though not devoid of some obscurity and apparent contradiction, are very valuable, and closely applicable to the subject in hand.

Elastic membranes in the vessels give tone or murmur under two conditions: either when thrown into vibration by an external influx (tone), or being relaxed, are suddenly made tense (murmur). The motion of the blood in the vessels of itself never gives rise to sound; sounds heard in them entirely resulting from the movements of their walls, produced by the fluid in motion. Sounds pass into murmurs from unequal tension and irregular vibrations. In a vessel of unequal calibre, vibrations and sounds arise, which are either tones or murmurs, according to their rapidity. The blood-current preserves its shape when passing into a wider space and less tense tube; the elasticity of the tube causes contraction, than expansion, and again contraction; and thus successive movements, if sufficiently rapid, produce sound, its kind depending upon the parietal thickness, width, and form of the column, and not being produced in the narrow, but wider succeeding point.

"All vascular bruits are in the venous occasioned", Dr. Kiwich states categorically, "by the inequality of space in the bore of the vessel, and by the unequal tension of the latter. A determinate acceleration of the anginosus current, and a relative peripheral diminution of the blood column, are conditions more remotely concerned in their production."

"The inequality of space is produced most frequently by a partial compression of the arteries, more rarely by the augmentation of their diameter."

"The vascular bruits observed in chlorotic subjects, like those heard in the abdomen during pregnancy, are remarkably phenomena of compression."

"Bruits are never produced in the veins, but are invariably to be sought for in the arteries."

"According to this view, there exists, then, in the arteries, continuous murmurs, that is to say, systolic and diastolic sounds are therein produced."

"[Many of the above deductions, it will be remarked, differ from the views previously held as to venous and placental murmurs, and require confirmation.]"

In the vascular parietes, during health (?), diminution of the muscular contraction in the vessels, and impoverished blood, are the chief elements giving rise to vascular murmurs.