which yielded to bleeding from the arm, leeches, and calomel and opium; after which he made a good recovery, requiring nothing more than an occasional dose of castor oil, or a common domestic remedy.

Lawrence relates, in his *Treatise on Ruptures*, page 296, a case resembling the above in some particulars, but having a different result. In that, there was absence of the testicle on the hernial side of the scrotum; the stricture was situated at the internal aperture; this was divided, and the intestine returned: however, the constipation and symptoms of strangulation continued in spite of all efforts, and the man died on the following evening. The *post mortem* examination showed that within the abdomen, and just behind the ring, there was a small piece of intestine, perfectly black, and gangrenous, which had been strangulated by a preternatural band of adhesion, extending from the peritoneum, close to the ring, to the mesentery. Had the bowels not been so obstinately fixed in the present instance, it is not improbable it would have been returned also, without our discovering this second stricture,* as it was placed above the internal aperture, and, therefore, not within range of an ordinary examination, more especially as the operation was done by candlelight. Of course, such an occurrence would have been fatal to the patient, and it behoves us not to be content in these cases with a mere easy return of the bowels after the division of one stricture, though that be at the internal ring, but to ascertain most diligently that no obscure adventitious cause of strangulation still remains. I may add that no trace of a testicle could be found.

Original Communications.

**CASE OF GLANDERS IN MAN.**

By Frederick Mason, Esq.

[Read at the Meeting of the Bath and Bristol Branch, Feb. 21st, 1856.]

The earliest surmise on the possibility of the transmission of glanders or fancy to man, is said to be contained in a work by Waldinger, published in 1810; yet no attention appears to have been directed to this subject; and the fact of its being communicable, appears to have remained unknown to veterinary surgeons until the year 1817, when one of the students of the Veterinary College contracted the disease after having received a small wound on the hand whilst dissecting the head of a glandered horse. Abscesses made their appearance upon different parts of the body; with matter taken from one of which, Mr. Coleman inoculated an ass; and the inoculation ended in fancy and glanders, and death."

Professor Coleman, in 1811, pronounced that the horse and his fellows in and, the constant source, were alone obnoxious to the disease known under the appellation of glanders and fancy; that man and all other animals, save these, were as insusceptible of taking such a disease as animals on their part were of taking certain contagious diseases proper to man, or of taking certain other diseases peculiar to certain other distinct species of the animal creation.

Mr. Percivall says: "I have scores of times dissected glanderous heads and faciaceous limbs, imbed my fingers, heedless whether they had any cuts or scratches upon them or not; in the discharge from the noses of glandered horses, applied even my own nose to the apertures of their nostrils, in the purpose of ascertaining the presence of feater; during which, I must have inhaled the very breath of the diseased animal. Scores of times, I repeat, have I done this all, regardless of washing my hands or wiping my face after such examinations; or, at least, until such time as I had leisure and opportunity so to do; and yet, providentially now I must look upon it—have I escaped every sort of contamination."

Since this time, many very interesting papers on this subject have been published; and I may allude to those of Dr. Elliotson, in the *Medico-Chirurgical Transactions* for 1830; Mr. Travers's work on Constitutional Irritation; M. Beyer on Glanders and Farcy in Man, published in 1837; and Mr. Percivall on Glanders and Farcy in Man, in the *Veterinarian* for 1845. The first well-marked case was published, July 1830, in the Medical Gazette, and others have been recorded from time to time in this and other medical periodicals. At p. 716 of Graves's *Clinical Medicine* (1843), a case of glanders, and one of button fancy in man, is recorded. In the *Association Medical Journal* for July 22nd, 1853, there is an abstract of the histories of all the cases related during the preceding four years; and in the same journal, April 7th, 1854, is an able paper by Mr. W. L. Cox; so that it is now an established fact that the disease is transmissible from the horse to man, not only by inoculation, but by contagion and infection, and also by the absorption of the poison by the cuticle and mucous membranes, without any abrasion of the surface. Considering the large number of individuals employed in attendance on farced and glandered horses, and that in the majority of these cases no greater precautions are now observed than were in Mr. Percivall's time, this disease is still rarely observed in the human subject; and that it would appear that we do, to a great extent, enjoy immunity from, and that it is only under some peculiar condition of body, such as already impaired health, fatigue, exhaustion, etc., that we become obnoxious to the disease.

Nearly all the cases of this disease having proved fatal, I hoped to have derived some information from the annual reports of the Registrar-General, and for that purpose searched those already published; but, unfortunately, the deaths from this disease appear to be classed with those from erysipelas; and the only mention made of glanders is in a note appended to the table of causes of death in the report for 1841, viz.:-"Under erysipelas are included glanders, two males, aged 32 and 54 years. Glanders, from the matter of a glandered horse, coming in contact with a wound in the thumb, a male, aged 57 years." Also, in the report for 1842, a similar note states:-"Glanders, two males, aged 22 and 46 years."

From such slight data, it is impossible to form a correct opinion as to the annual number of deaths; but knowing that they are few, that the disease is rarely seen in man, and that it is only in a glandered horse that the human subject can be exposed to the infection, it is not difficult to draw conclusions, that when not clearly traceable to inoculation, it is often difficult of diagnosis, I have thought the following case worthy to be brought before your notice this evening.

**CASE.** Mr. W. was well known to most of the members of the Bath Branch, he having practised for many years in this city as a veterinary surgeon. He was 58 years of age.

On Sunday evening, Oct. 14th, 1856, he attended Divine Service; as soon as it was finished, he hurried home, complaining of cold shiverings, and acute darting pains in his limbs; he had some warm brandy and water, and found immediate relief, and said he felt quite well again. During the succeeding days, he was harassed in mind, and exposed to fatigue; and he had already been away from home for two days: he returned on Friday evening, October 26th. All his previous symptoms were now aggravated, and he soon went to bed. For the next six days, he appears to have remained in bed, to have lived on low diet, and to have taken frequent doses of purgative medicines.

At 10 o'clock, P.M., Nov. 1st, I received a message from his wife, asking me, if I passed the house the next day, to call, as she thought her husband was suffering from an attack of rheumatic gout (which appears to be the ordinary form in which this disease attacks its victim). I accordingly called the next morning, nineteen days after premonitory symptoms had set in.

I found him in bed, lying on his back, with a very quick and small pulse, but remarkably soft and compress-
ble; the skin soft and slightly moist, the edges of the tongue clean, and of an amanic paleness; and the surface covered with a creamy secretion, similar to that usually observed in cynanche tonsillaris. He complained of pains in the legs. On examining the left foot, I uncovered at the junction of the second and third toes a small black vesicle, looking as though bruised from a pinch, from which a drop of blood had exuded beneath the cuticle; proceeding from this, on the foot and not at all on the toes, was an unhealthy looking dusky red patch, about two inches wide and one inch and a half long; and from this, running over the dorsum of the foot, was a single red line of the same dusky hue.

Before examining further, my first impression was that I had before me a case of commencing septic gangrene; but my attention was directed to a hard swelling on the outer side of the left thigh in its lower third. On the inner border of the gastrocnemius muscle of the right leg was another hard swelling, about the size of an egg; before the appearance of which, the skin over it was said to have been red and tender. On the outer border of the same muscle there was another swelling the size of a walnut. All these swellings could be felt with the finger, covered, and had the feel and appearance of large and inflamed lymphatic glands. On moving towards the head of the bed, he asked me, “Did I not think him suffering from phlebitic gout?” I told him, he certainly was not.

I now directed his left hand to be uncovered, to which he immediately applied a dressing of sodium and pectin, and the knuckle of the third finger was a swelling, and the moment I touched it, he suddenly exclaimed, “Why, there is pus there; do you think I have septic gangrene?”

I questioned him as to the nature of the diseases he had had under treatment, and whether he had lately been near glandered horses? He said: “A short time ago he was injecting the nostrils of a glandered horse, and the animal blew the discharge and injection over his face; that he instantly drew the sleeve of his coat across it, to wipe it off, and his coat was afterwards brushed clean, and he thought no more of the circumstance. He had no knowledge of any wound or abrasion about him.” And as there was no ulceration or other mark denoting local absorption of the poison, I endeavoured to relieve his mind of the possibility of his suffering from glanders or septic gangrene, the distinctive symptoms of which he described to me. There was no affection of the nostrils or maxillary glands. He had troublesome, hacking cough, opened the abscess on the left hand, and matter of a dirty brown colour escaped, which looked as though pus had been mixed with some red particles of the blood. I ordered him a nourishing diet, with wine.

I saw him again in the evening; the tongue had lost the peculiar secretion of the morning, which did not appear again during his illness. I now found he had a swelling on the outer edge of the left elbow, and also some on the right fore arm, similar to those on the lower limbs. He likewise complained of great pain in left shoulder.

Nov. 3rd. The black vesicle on the foot had increased in size, and on making an opening into it, matter similar to that in the hand escaped.

He became excited and anxious about himself, and answered questions hastily. He now expressed a wish to see Mr. Norman; and I accordingly met that gentleman in consultation in the afternoon, and continued to do so daily. Fluctuation was now distinct in the swelling on the inside of the right leg; it was opened, and sanious pus escaped.

For a few days, there was no great variation in the symptoms; some of the swellings appeared to slowly soften down, others remained stationary. There was occasional wandering of the thoughts, and also nausea and vomiting.

On the 10th, the vomiting became very severe, everything being rejected from the stomach in less than an hour. He took no food. He complained of great pain in the right ankle joint, which was swollen, and red over the external and internal malleoli.

Nov. 15th. The wandering increased to a state of almost constant muttering delirium, with much subcutaneous tenderness, picking at the bed clothes, etc. The abdomen tympanic.

An abscess in the left thigh was now opened, during the morning, and complained greatly of the pain in the right ankle; towards evening, he relapsed into a state of insensibility and delirium.

Nov. 17th. He was much the same, with the exception that the vomiting had assumed the coffee-ground character.

Nov. 18th. Fluctuation was now evident over the internal malleolus of right ankle, and on an opening being made, pus of a more laudable character than any hitherto seen escaped. In the evening, he sank into a state of quiet insensibility, and expired early in the morning of the 19th.

There appeared great irritation of the nose, he was constantly rubbing it; and during the last few days he suffered from slight difficulty in breathing through it; it became slightly swollen, but there was no discharge from it.

A small swelling on the right side of the lower jaw just in front of the insertion of the maseter muscle caused him great anxiety. There was no other evidence of disease of the maxillary glands.

TREATMENT. Frequent doses of sesquisulphate of ammonia were given, as recommended by Dr. F. W. Mackenzie in two successful cases related by him in the London Journal of Medicine, Nov. 15th, 1831, and Sept. 1832. For three days there was some amendment; his tongue became cleaner, and his appetite improved; he afterwards refused food; his stomach became irritable; nausea and vomiting set in, and he gradually sank. Attempts were made to check the vomiting with effervescing mixtures of citrate of potash, citrate of ammonia, and creasote, with little effect. Occasional doses of calomel were given as a purgative. He ultimately took large quantities of brandy.

REMARKS. In the absence of any other cause for this state of pyaemia, we may fairly assume that this case had its origin in the poison of glanders, to which Mr. W. had been more freely exposed than he was himself willing to admit. In addition to the discharge from one horse being thrown over his face and hands, and which he did not appear to have taken any great pains to remove, he had a short time before his illness assisted in the post mortem examination of the head of a horse, which was said to have been killed on account of being glandered; and, I am informed, a third horse that had been under suspicion, with most pronounced symptoms had shown themselves in Mr. W.

The disease in many respects answered to the description given of it by M. Rayer, who says:—“In some cases, the most striking phenomena consist of a pustular cutaneous eruption, a thick and glutinous nasal discharge, and a typhoid aspect. In others, the symptoms of nasal lesion are obscure, while the external characteristic (the pustular eruption and gangrenous affection of the skin) predominate. Again, pains in the limbs, purulent deposition in various parts of the body, and inflammation of the lymphatic vessels and glands, form in the outset the most striking features of another set of cases, and the disease is strictly analogous to the acute farcy glanders of the horse.”

“When the disease is contracted by infection, the invasion is marked by fever, attended by gastric symptoms, diarrhoea, or pains in the limbs. Upheld in this manner, the disease ordinarily presents the following phenomena in its course:—articular or muscular pains, in some of the extremities; pustular eruption; a thick glutinous nasal discharge, and a typhoid aspect; in others, the symptoms of nasal lesion are obscure, while the external characteristic (the pustular eruption and gangrenous affection of the skin) predominates. Again, pains in the limbs, purulent deposition in various parts of the body, and inflammation of the lymphatic vessels and glands, form in the outset the most striking features of another set of cases, and the disease is strictly analogous to the acute farcy glanders of the horse.”

Most of the writers on this subject have stated that farcy is a disease of the lymphatic vessels and glands; but it may be observed that in Mr. W.’s case neither of the swellings or abscesses occurred in the situation of the recognised lymphatic glands; and from the purula of the
histories of a large number of cases, I have come to the conclusion that whatever may be the seat of disease in the horse, these glands are seldom or ever affected in man. In these cases of glanders, the horse's history is essential in determining whether this disease did occur in man previous to the commencement of the present century, or whether it was overlooked, in consequence of the assumed impossibility of its transmission. Assuming it to be a new disease, to what extent is it likely to prevail if greater precautions are not exercised by those more immediately exposed to the contagion: farriers and grooms being still in a state of ignorance as to the risks they necessarily run from the infectious handling of glandered horses.

That Mr. W. died of glanders, I think I have fully proved; and that the disease was decidedly produced from contagion, I have no reason whatever to doubt.

**Experiment.**

Nov. 19th, 7 P.M. With pus taken from the abscess of the right ankle on the preceding day, I inoculated a jackass on the septum of the left nostril and the ala of the right. I also rubbed some of the pus on the conjunctiva of both eyes.

Nov. 20th, 4 P.M. A slight discharge, clear and watery, was running from both nostrils and from both eyes; the conjunctiva looked red and congested. The man in charge said there was no discharge when he examined in the morning.

Nov. 30th. Discharge continued. He blew as though there was an obstruction to breathing through the nostrils.

Dec. 3rd. Although the spot scarified on the septum of the nose had appeared to be healed, a clear discharge now appeared issuing from it.

Dec. 5th. This spot appeared painful when touched; discharge still coming from it and from both nostrils, and thicker than it had previously been. One of the sublingual glands was enlarged.

Dec. 22nd. There was still a slight discharge from both nostrils, yet the disease did not appear to make any progress; and thinking it useless to keep the animal longer, and he being unfit for work in consequence of having dislocated his thigh some time before the experiment was tried, I ordered him to be destroyed.

The unsatisfactory nature of this experiment may be explained thus:—The pus used for inoculation was taken from the last formed abscess, and, as before stated, the first to have any of the characters of laudable pus. The abscess itself may also have been of a secondary character. The animal also was removed from a very poor neighborhood, where, in all probability, he had been ill-fed, and badly treated, to a large comfortable stall, and instead of the poor diet to which he had been accustomed, was, contrary to my constant direction, fed on the best hay, etc., and had as much as he could consume;—a condition more likely to retard or cure, than to favour the production of glanders.

**Case of Abortion, with Flooding, in which a New Utero-Vaginal Plug was Successfully Employed.**

By W. F. Cleveland, Esq.

[Communicated to the Harwani Society.]

In a recent number of the Lancet, and also the Medical Times and Gazette, there is an account of a new utero-vaginal plug exhibited by me before the Medical Society of London. It is shorter and narrower than the instruments usually tested; but I am now enabled to state the result of its application in a case which, on account of the extent of the hemorrhage, is certainly satisfactory and encouraging.

**Case.** I was requested by my friend Dr. Ridge to visit Mrs. D. (to whom he had just been summoned) with him, on the 20th ult., about completing the second month of pregnancy, when, two days previous to our seeing her, she had been attacked with what she described as labour pains, shortly followed by a profuse discharge of coagula, as well as liquid blood. The hemorrhage had continued unabated, several large coagula having passed within the last few hours, but no membranous substance had been detected. Cloths, wet with vinegar and water, had been applied; the bowels had been moved by castor oil; and cold water had been injected into the rectum.

On examination per vaginam, the uteri was patulous, cervix dilated. A portion of the ovum, entangled in firm coagulum, and protruding from the os, was removed; but it was evident, from the size of the uterus, something still remained. As blood was escaping freely, and there was no probability of the rest of the ovum being then expelled or removed, it was determined to plug the vagina. After evacuating the bladder and applying a handkerchief to the abdomen, I introduced a No. 2 ball into the upper part of the vagina, and injected water, previously made as cold as exposure for some time in a cold atmosphere would make it. The introduction of the instrument occupied but a few moments. The patient felt the sensation of cold a little, as also that of distension; but it soon passed off. After waiting a quarter of an hour, and finding there was no escape of blood, she was left for the night, and directed to take a fourth part of the following mixture every three hours.

**B.** Acid gallii. 3j; acidi sulph. dil. 1x1; tinctura opii 3j.; syrupi 3j.; aq. cinnamomi 3j.

It should be stated, that, at the time it was decided to use the plug, the patient was in bed, and much exhausted from the hemorrhage, which had been going on for more than forty-eight hours. In attempting to raise herself in bed, she had fainted. The face was blanched; pulse small, and very quick.

Feb. 22nd. She has had some sleep, and there has been no hemorrhage. There is no appearance of any blood when she has fainting escaped. The plug was now removed with the greatest ease; it had been in situ twelve hours. There was a small coagulum at the top of the ball. A snious and fistid discharge followed on her passing water, and moving in bed to have her linen changed. The patient states that she passed water twice during the night without the least inconvenience from the instrument; and indeed she should not have been aware of its presence from any sensation produced by it. She has taken wine and nourishment, and has considerably rallied. Little or no progress was made towards the expulsion of the ovum.

On the following day, there was a return of the hemorrhage, although in a less degree. The patient was ordered a large dose of castor oil; and as this did not act, she took some sulphate of magnesia, which moved the bowels several times; while pain in the back was at the same time induced. Several attempts were made to seize and extract the ovum with a pair of long forceps; but, owing to so small a portion of it being extruded, and that exceedingly lacerated, they were given up. She now took several doses of the ethereal tincture of ergot; and not until three days more had elapsed, or eight from the commencement of the abortion, was the rest of the ovum expelled. A fistid discharge continued for several days, and then gradually ceased. She has been slowly recovering her strength.

**The Principle on which the Instrument Above Alluded to is Constructed is as Follows.**

A common vulcanised India-rubber air-ball, sold at the shops as a child's toy, and numbered according to size (a No. 2 being the size of a large orange, and applicable before the vagina has been greatly distended), as in the recent passage of a fully developed fetus, is fastened to one end of an irremovable metallic pipe, six inches long. At the other end of the pipe is a stopcock, with shoulder fitted to receive the nozzle of a large syringe. The air is to be pressed out of the ball, and kept excluded by turning the tap, when it (the ball) may be folded into a small and compact mass, and introduced into the upper part of the vagina. The plug is now tied to the ball with a length of cloth or India-rubber air-ball, and appears to fit tightly. The air is to be subsequently slowly injected till it is distended to a sufficient size, when the tap may be closed:—the ball thus inflated is the plug. The air escaping at the stopcock is to be excluded with the stopcock, which is to be secured by a ligature. As the ball is of India-rubber, it will be less liable to burst than the ordinary plug made of a bladder. It will be less liable to burst than the ordinary plug made of a bladder.