drops, and returns to its former position by an apparently natural and voluntary effort. This appears to be the chief complication which makes this case to differ from other recorded cases of glosso-laryngeal paralysis. The tongue is almost motionless. When asked to protrude it, he can at times (this is not invariably the case) move it just over the edge of the lower row of teeth, and, when drawn out forcibly by a pair of forceps, it is smartly retracted—showing that the genio-hyo-glossus muscle is not so much palsied as the hyo-glossi and linguales, as he is totally unable to render it concave, or move it from side to side. The nutrition and sensation of the mucous surface of the tongue does not appear to be interfered with. There was some difficulty in examining carefully the velum and pillars of the fauces and the interior of the larynx, from his not being able to depress the lower jaw sufficiently. After as exact an observation as possible, the isthmus faucium, including the palato-glossi, palato-pharyngei, uvula, as well as the levatores and tensores palati, seem almost devoid of all tactile sensibility. On stimulating these parts by means of a quill, the muscles do not respond, the uvula and velum pendulum palati remaining in their flaccid condition, and there is no reflex movement of the middle and inferior constrictors to produce the feeling of nausea which invariably accompanies this act; but, directly the posterior wall of the superior constrictor muscle is touched, it gives him pain. Trousseau says that, in these cases, sensibility was everywhere normal, and that irritation of the mucous membrane of the soft palate produces motion of the velum by reflex action. The patient is almost devoid of masticating power, not so much from absolute inability to raise and depress the lower jaw as from the absence of alternation of lateral movements, which are influenced by the external pterygoid muscles. He had scarcely any power to exercise the first or second stages of deglutition. This is readily accounted for by the almost perfect immobility of the tongue. It cannot be pressed upward against the hard palate; and its base cannot be retracted at the same time that the larynx and pharynx are raised. The epiglottis, which in the second stage would naturally fall upon and close the upper aperture of the larynx, remains partially inactive, and does not allow the food to pass over it to be grasped by the pharyngeal constrictor. Hence arises the condition of partial asphyxia, from which he had not unfrequently suffered. The method he adopts to take solid food is this: he crams the mouth until it can hold no more; and after the mass of food has become softened by saliva, he pushes it with his finger through the isthmus of the fauces over the epiglottis, where it falls by gravitation into the grasp of the inferior constrictor of the pharynx. When once here, this muscle acts to propel it onward. From this, it was concluded that the inferior constrictor does not participate to such a degree in the paralysis—at all events, in the present stage of the disease. This might perhaps be accounted for on the ground that this muscle receives a branch from the external laryngeal nerve, in addition to the supply from the pharyngeal plexus. It sometimes happens that the fluids which he is attempting to swallow are forcibly ejected, not only from the mouth, but through the nostrils. This is the result of some portion of the fluid finding its way through the chink of the glottis, in consequence of the incomplete closure of the aryteno-epiglottidean folds. The next point to be noticed, and a most important one, is that the man is absolutely dumb. He cannot pronounce a consonant or vowel, and the only sound which emanates from the larynx is a grunt. This complete aphonia, according to Dumenil, depends on two causes—paralysis of the muscles of the larynx, and paralysis of the thoracic muscles. Indeed, physiological experiments prove that, when the spinal accessory is torn off at its root, complete aphonia ensues from relaxation of the vocal cords.

In this case we have a complete delineation of bulbar paralysis, in its latest stage. It is not progressive, but *stationary*. The man is now in good health, but he has complete paralysis of the bulbar nerves. From the sudden nature of the attack, one is led to suppose that its causation was due to hæmorrhage into the medulla and superficial fibres of the pons Varolii—bulbar paralysis.

We have to consider, in reference to this man's present condition, one or two points of interest which have not yet been alluded to, namely, the increased salivary secretion, the aphonia, dysphagia, and dyspnoea. The overflow of saliva commences at the same time that the first stage of deglutition becomes involved; and is due most probably to this fact, that the patient has little power to swallow it. There can be no doubt that its secretion is far beyond the normal quantity, and resembles a condition of ptyalism. The cause of this must be referred to paralysis of the chorda tympani nerve. The difficulty of swallowing can be clearly traced through each of its stages. The first stage is simultaneous with palsy of the ninth nerve; the second, with paralysis of the motor branches of the glosso-pharyngeal; and the third, with paralysis of the pneumogastric, through its motor influence derived from the spinal accessory. When the nuclei of the pneumogastric and

spinal accessory are invaded, we find almost total inability to pass solid food into the œsophagus. Fortunately, however, for the patient, although the palato-glossi and palato-pharyngei, with the intrinsic muscles of the larynx, are almost devoid of mobility, their sensibility is to a much less degree implicated; and so by reflex movements, however inco-ordinate the act of deglutition may be performed, although in the effort patients are often barely saved from suffocation.

In one of my cases, paralysis of the vagus was most marked, and caused very distressing symptoms. The inspirations were deep and prolonged, and gave to one the idea that the chest alone, and not the lungs, was expanded. At times, during these attacks, temporary breathing was prolonged almost to complete asphyxia, and artificial respiration had to be resorted to. The pulse would be scarcely appreciable at the wrist, and the sphincters were invariably relaxed. It must be remembered, though, that these paralytics, as a rule, retain voluntary power over the sphincters up to the time of death.

Thus far we have presented to us all the progressive and characteristic signs of bulbar paralysis. As I have shown in Case II, it does not kill for some time, if the patient be carefully and regularly fed. This is a point of the highest importance in treatment; and will more than anything else retard the fatal issue, which, however, under any circumstances, is merely a question of time; for as enervation increases, there is marked failing of power all over the body—the upper extremities are feebly raised to the mouth to wipe away the increased flow of saliva, and the lower limbs are dragged along until strength is lost—for this is the last display of voluntary power. The reclining posture is impossible, on account of the paroxysms of suffocation; and death often arises during sleep, from the flow of saliva into the larynx, or from plugging of the bronchial tubes with viscid mucous, which the patient is unable to expel.

[To be continued.]

ILLUSTRATIONS OF PRACTICE IN COUNTRY CORONERS' COURTS.*

By JOSHUA PARSONS, M.R.C.S.Eng., Frome.

THE personal anecdotes of which this paper in great measure consists were read by me (with one or two exceptions) to the Bath and Bristol Branch of our Association some years ago, and would not have been reproduced here had it not become evident, from speeches in Parliament and articles in professional as well as general periodicals, that public attention has now, however tardily, been directed to this matter, and that the juncture is, therefore, one in which every man who believes he can say anything to show the faultiness of the existing system, and help towards its improvement, is bound to speak. And I do not think the audience before whom I have the honour to stand is inappropriately appealed to on this subject; for not only is our profession fitted, by its position and intelligence, to take its place amongst the foremost in all matters of social well-being, but we have a special interest in this matter. The position of a medical witness in a coroner's court is one not only of heavy responsibility as regards others, but of the utmost importance to his own professional reputation; and, as it is a position which either of us may at any moment be called upon to take, we may well concern ourselves to know something of the tribunal whose deliberations we have to assist, and to use our influence in adding to its efficiency and impartiality. In our days, science is too often hired to be the handmaid of crime, and the pair together sometimes weave a veil through which the best directed inquiries fail to penetrate. There is also reason to fear that some crimes, such as infanticide, are increasing in frequency as well as in subtlety amongst us. It, therefore, behoves us to see that our sentries are wide awake with arms and accoutrements all in good order. That such is not the case, that the safeguard against crimewhich society is supposed to derive from coroners' inquisitions exists more in theory than in practice, has long been well known to medical men, especially those practising in country districts; and several cases of more or less notoriety have occurred in the last two or three years, which have at last awakened the interest of statesmen and the public. In order, as far as in me lies, to keep this interest awake in your minds, I bring the following personal experiences before you, and feel sure that you will admit that such a list, drawn from the knowledge of one man moving in no very extended sphere, reveals an amount of indecorum in the coroner's court and incompetency in its chief officer, which shows the urgent need of alteration and improvement. My first instance is as follows.

* Read before the Public Medicine Section at the Annual Meeting of the British Medical Association in Sheffield, August 1876.

Many years ago, an infirm old man and his younger son were sitting by the fire, when an elder son, coming in drunk and furious, began to ill-treat the father. The younger thereupon challenged the elder to fight with him, and they went out into the garden for the purpose. While in fighting attitude, the elder son, having struck one furious blow, fell down dead, though he had received none in return. A *post mortem* examination was ordered, and I was able to give positive evidence that the man died of apoplexy, without a sign of personal injury. In spite of this evidence, the coroner directed the jury to find a verdict of "Manslaughter", and then delivered himself of the following speech, which made such an impression upon my mind, that I am able to report it nearly, if not quite, *verbatim*.

"E. R. These twelve gentlemen have made a very careful inquiry into the death of your brother, and, considering the provocation you received, have thought it their duty to bring in a verdict of 'manslaughter' instead of murder, and it is, therefore, my duty to commit you to prison on that charge; but I wish you to remember that, although you may escape the punishment of death, yet I have no doubt that, in the sight of God, a man who kills his brother is more guilty than one who does not."

I need hardly say that, at the ensuing assizes, the grand jury threw out the bill after a very short consideration.

About the same time, an old man, an itinerant clock-mender, had been to a village distant from his home, and received a sum of money for his year's services in regulating the church clock. He started for his home, but never reached it, his dead body having been found by the roadside and all his money gone. I saw the body after the inquest had been held, and found that, although there was abundant evidence that he had been drinking with men of bad character, and had left his last halting-place in apparent good health, not only had no medical evidence been called or necropsy ordered, but that the corpse had never even been stripped for external examination. A verdict of "Died by the visitation of God" had been returned. A few years later, an aged man at Philip's Norton had an apoplectic seizure and died in a few hours. An inquest was held, and a verdict of "Died by the visitation of God" was returned, coupled with an expression of the jury's opinion that the parish medical officer (Mr. Parsons) had been neglectful in not seeing the man. A report of this verdict in the local newspaper was the only intimation I ever received of the illness or death of the man.

The hideous details of the crime so well known as the "Road Murder" have been long before the world, and I shall not, I hope, be overstepping the bounds of propriety or charity in blaming the coroner for an omission which, I am sure, arose from the purest motives of humanity; but it is beyond a doubt that, had all the members of that unhappy family been isolated and separately examined on the first day, a clue would have been found to the mystery, and the history of English jurisprudence would have been saved a page of the most grotesque and signal failure. That this opinion is not unfounded will be evident when I mention that, after her confession and condemnation, the murderess told her legal adviser where to find the weapon with which the crime had been committed. It was one of an old unused pair of razors which had been ground to a point and made into a dagger by hammering the rivet, and, after serving its purpose, had been again shut up and returned to a box in the father's dressing-case, where it was found lying unsuspected six years afterwards. This second operation of concealment could not, I think, have been accomplished on the day of the murder, and, therefore, a search on that day would probably have brought it to light.

Since that time, my neighbourhood has been disgraced by another fearful crime called "The Woolverton Murder". I assisted the gentleman who made a *post mortem* examination of the murdered woman, and, as usual in such cases, we took careful notes of all signs of injury that presented themselves to our notice. Those notes were necessarily of considerable length, and, when the medical witness was called upon to detail their contents before the coroner, he was so frequently interrupted by questions of—Is that important? Need I put that down? etc., that one of the injuries mentioned in our notes did not appear in the evidence as taken down by the coroner, although it did in the depositions made before the magistrates. Mark the consequence. When the case was tried, the counsel for the defence took advantage of this discrepancy to attempt to throw discredit and ridicule on the whole medical evidence, and, in a case less clear, a fatal miscarriage of justice might have resulted. I have myself resolved that, should I ever again be placed in the purgatory of the witness-box, I will, without regard to time-tables, insist that every word I think essential shall appear in the depositions.

I have alluded to the alleged increase in the crime of infanticide; me give an instance to show how that crime may too often escape

undetected. A friend, then my partner, was some years ago called upon to give evidence respecting the death of an illegitimate child who had been found in a privy. He was asked by the coroner, "Do you think this child was born alive?" He answered: "I am unable to give an opinion." The coroner said: "The child is in the next room; go and look at it." He answered: "I decline to do so, as it is impossible to give an opinion which I can substantiate before a court of justice without a *post mortem* examination." No such examination was, however, ordered, and a verdict of "Found dead" was recorded. Had a less wary or experienced witness ventured on an opinion which led to the committal of the mother, you can imagine the figure he would have cut under cross-examination by the counsel for the defence.

There is one form of child-murder too rife amongst us, quite as certain, though more subtle than the knife or the pond, which consists in depriving the poor child of sufficient air, food, cleanliness, and warmth. The gentleman just alluded to has on two or more occasions, after repeatedly warning the mothers or nurses of the effect of their neglect, refused, on the death of the child, to certify the cause of death, and inquests have been held on them in consequence. In neither case has the medical attendant or any other professional witness been called, and verdicts of "Death from natural causes" have been returned.

Let me give another instance to show how the peremptory demands of railway locomotion interfere with that deliberate and orderly procedure usually supposed to characterise our judicial investigations. I was not long ago witness at an inquest holden, as usual, in a public-house at some distance from the house where the corpse lay. The jury, having been duly sworn, were sent by the coroner to view the body, and, on their return, were informed by him that, in order to save time, he had examined the witnesses and taken down their evidence, which he would now read to the jury, and leave them to ask any questions they might think desirable. Need I say that such a summary proceeding would not have been tolerated by a jury selected on any other principle than that common in country places; viz., to collect twelve men who will be sure to spend the shilling which each one receives in drink for the good of the public-house in which the inquest is held?

The next anecdote with which I shall occupy your time is so grotesque, that you might fancy I had cut a page out of the history of some Eastern cad; but the circumstances are of recent occurrence, and were related to me by a medical friend who was present at the inquest. A poor man had been injured by a colliery accident, and was suffering so much that his medical attendant thought it advisable to administer opium, and accordingly sent a bottle of medicine, of which one dose was given at bedtime. Early in the morning, the man was found dead. It so happened that the medical man was a new comer to the district, and rumours were circulated that he had poisoned the patient. These rumours had reached the coroner's ears, and inspired him with a generous desire to defend a young beginner of his own profession. Accordingly, after the necessary inquiries into the circumstances of the accident, he turned to the jury and spoke nearly as follows:—"Now, gentlemen, I hear that some of you think the doctor poisoned this man; I will soon show you that he did not. You see this bottle contained several doses of the medicine. The man took one and there is a good deal left. Well, to show you it is not poison, I will drink a good dose of it myself, and it will warm my stomach." This he accordingly did, and the proof was triumphant, for he is alive and, I hope, well to this day.

I could lengthen my page with many more instances; but have I not brought forward enough to show that the country coroner is not what he should be? The much more important question remains, What should he be? I answer, A judge, with the legal knowledge, the habit of sifting and dealing with evidence, which are admitted to be indispensable in all other judges, and a scale of remuneration which shall insure his being in a high social and professional position. It was, I have always held, a great misfortune for our profession when, about forty years ago, an agitation was got up with the intention of securing the office of coroner to one of its members. I freely admit that medical coroners have been often valuable public servants, and have upheld the dignity of their office as well as the country attorneys, retired tradesmen, and others to whose lot it has fallen; but I hold that, in many other cases, the medical coroner has, by insufficient knowledge or unseemly conduct, lowered his profession as well as himself; and that, in a material point of view, his appointment is a dead loss to his medical brethren. In the districts in which I have resided, I have had several opportunities of comparison, and I have invariably found that the appointment of a medical coroner was followed by a great diminution in the amount of fees received for professional evi-

dence and *post mortem* examination. Let it not be said that this capacity in the judge for taking the place of his own witness was a gain to the public. I hold it to be entirely the contrary. He acquired the capacity by a special education, which of itself guarantees that he shall not possess the knowledge of law required for the due discharge of his function, and this ignorance of law he has no power of supplementing by calling, in ordinary cases at least, a legal adviser, and hence gross and irremediable mistakes and omissions frequently occur. The position of a medical coroner must often, I should suppose, be as uncomfortable as it is undignified. Having obtained it by an expensive election and, perhaps, a servile canvass, he finds the remuneration too small for a sole source of income, and has, therefore, to make its duties fit in with the toils and anxieties of private practice; and he is also restrained in the inquiries he may think it necessary to make by objections, on the score of expense, made by an irresponsible authority to whom the circumstances are unknown. The position of these gentlemen as well as the interests of society have been, I should suppose, damaged by the change made, in late years, in their mode of remuneration. It was surely better for society that the coroner should be tempted by the fees and mileage to hold or adjourn an inquest unnecessarily than that he should, by the exigencies of his private practice and his fixed salary, be led to suppress or hurry over an important inquiry.

While writing this paper, I have seen the letter of Mr. Serjeant Cox, quoted in our JOURNAL of the 22nd ult., and it seems to me full of important suggestions. The difficulty as to the appointment of coroners which perplexes the learned serjeant would perhaps be lessened if the local government of the country were vested in such county boards as were suggested in the able paper read by Mr. Michael before the united conference of our own Association and the Social Science Congress in May last.

MAY STRICTURE OF THE URETHRA BE HEREDITARY?

By MARCUS ALLEN, L.R.C.P.Ed., Surgeon R.N.

THE pathology and treatment of stricture of the urethra, even in the dawn of his art and science, greatly exercised the mind of the surgeon; and, in our own day, the writings of Thompson, the researches of Otis, and the labours of Hill prove that the interest of the profession in the question is neither dead nor sleeping. Less frequently in the etiology of surgical, perhaps, than of medical maladies, has the hereditary influence been sought for or recognised in investigating the causation of disease, and in neither of these great branches of the profession does our knowledge approach to completion of the various disorders that may be transmitted by descent. To enumerate here the several causes of stricture of the urethra, generally admitted by those who have made its phenomena a special study, would be foreign to the scope and object of the present paper. Suffice it, then, to say that congenital predisposition approaches most closely to the point for which I am contending.

Several years ago, I occasionally met, in the ordinary relations of social life, an elderly gentleman, who was then under treatment for irritability of the bladder, and who was also afflicted with stricture of the urethra and enlargement of the prostate gland. In addition to possessing a highly educated mind, he had acquired no inconsiderable knowledge of medicine as an amateur student when an undergraduate at the University, and the vesical affection was attributed by him to the effects on his nervous system of a severe crushing sustained many years before in the gallery of the House of Commons, and aggravated at a later period by an unexpected domestic bereavement; but the stricture of the urethra he considered to be hereditary. On inquiring his grounds for this opinion, he informed me that his father had succumbed to an operation for retention of urine necessitated by an organic stricture, and that he believed his grandfather had also been the subject of some affection of the urinary system—most probably a stricture. The father of my friend had in early life been engaged in practice as a doctor of medicine; subsequently, he succeeded to the family property, after which he followed the usual avocations of a country gentleman. At an exceptionally early age, he had contracted marriage, and there was not (so far as I could learn) the slightest suspicion that he had been in any degree accessory before the fact. The argument appeared to me to be the reverse of untenable, more especially as I knew the son of my friend to be the subject of a similar affection, for which he was unable to assign a cause, except that the disease was hereditary. The medical history of the representative of the fourth generation is briefly as follows. In childhood, he had suffered from nocturnal incontinence;

in boyhood, the incontinence of urine ceased, and he formed the habit of urinating twice in the course of the night; and, at the age of 14, he was for the first time discovered to be the subject of stricture of the urethra. Frequent call to micturate was the symptom which led to this discovery; riding had not been his favourite exercise, and no exciting cause could be named for developing the congenital predisposition, if merely a predisposition had existed from his birth.

My elderly friend has since died. The surgeon who signed the certificate of death stated that it resulted from stricture of the urethra; and, as his son was unable to give me any fuller information respecting his great-grandfather's health than that he believed him to have been subject to "some affection of the urinary system, most probably a stricture", I recently applied to a gentleman (still living at an advanced age, with all his faculties unimpaired), who can remember the family for four generations, but, unhappily, he is unable to elucidate the point.

REMARKS.—The statement "probably a stricture", referring to the representative of the first generation and coming from a grandson, must necessarily be received with a large amount of reservation, and I lay no further stress upon it than merely as affording presumptive evidence of disease of the urinary system. We have, however, a clear history of the malady in three successive generations. The nature of the disease in the second and third cases of the series was certified to respectively by surgeons of acknowledged ability; and, in addition to neither patient being particularly attached to equestrian exercise, it is worthy of note that neither of them was an officer in the army or navy; in the former service the "military seat" in cavalry regiments being a fertile source of originating as well as aggravating the disorder; and, in the latter service, duty aloft frequently leading to organic disease of the urethral canal (and in the gun-boats of which the practice of instrumentation as a remedial measure is virtually impossible), but were persons moving in the higher circles of home society, with every opportunity of following the instructions of the first surgical opinion of the day. The representative of the fourth generation is now alive, and has trained himself to catheterism at regular intervals, and the question suggests itself how far the incontinence of urine in childhood was a posterior effect, the result of a congenital hereditary stricture of the urethra. "Some sins of parents are visited as diseases upon the children until the third and fourth generation", writes the gifted author of *Diseases of Modern Life*; "but there are other visitations, also descending through many generations, which are due, not to the sins, but to the misfortunes or accidents of those in whom they originated and from whom they have descended." It may be that the remarkable series of cases which forms the basis of these remarks constitutes the proverbial exception essential to establishing the rule that stricture of the urethra is *not* transmissible by descent, or it may be that hereditary proclivities have become more intimately interwoven with the complex fabric of our modern civilisation. Strongly opposed, however, to dogmatism, the writer will have attained his object if he shall succeed in directing the attention of the profession to a possible obscure factor of this disorder as yet unrecognised by the schools.

CASE OF ANEURISM OF THE ABDOMINAL AORTA.

By JOHN C. LUCAS, L.R.C.S.Ed.,

Surgeon in Her Majesty's Indian Army, in Medical Charge 24th Regiment Native Infantry; in Medical Charge Luck Hospital; Officiating Staff Surgeon, etc., Camp Neemuch, India.

PRIVATE Manoo Pavab, aged 39, having twenty years' service, gives the following account of his case. He enjoyed excellent health until about eight years ago. When serving with the regiment, then stationed at Dharwur, in the Deccan, he first began to feel the sensation not unlike that from the pricking of pins and needles in his stomach (pointing to the epigastric region); this was attended at the time with vomiting directly after meals. He has frequently been admitted and readmitted under the care of the various medical officers who have since been in charge of the regiment.

In July last, he was admitted under my care, and, after a stay of twenty days, was discharged, with the recommendation for light duty and to be exempted from parade and musketry. He again presented himself for admission on August 8th, complaining of pain in the belly and vomiting, etc. On inquiry and cross-questioning, no sort of traumatic history could be elicited. The man, however, stated that his father died rather suddenly, after ailing for some time from similar symptoms.

The patient is an intelligent sepoy, about five feet seven and a