after taking some remedies ordered by Mr. Davies of Llandysil, she was relieved. She has never left her bed since this severe attack. For a fortnight afterwards she complained still of epigastric pain, but did not lose consciousness. At the end of a fortnight from the commencement of her illness, she began to suffer from convulsive attacks, which, from the description given, were epileptic. During the fits, the body was arched forward very considerably, the centre of the spine being very much raised from the bed. After continuing for a short time in a state of opisthotonos, the muscular spasm suddenly ceased, and she fell flat on the bed again. For a whole month she continued in a state of unconsciousness, suffering from constant repetitions of severe convulsive attacks, during which time she took little food. At the end of the month, she seemed to recover natural consciousness, and asked for food. From this time the fits ceased to be of the convulsive type; they were simply temporary loss of consciousness, with sudden awakings. For a month she partook of rice and milk, and a preparation of oatmeal and milk, in fair quantities. She then gradually declined in her desire for food until August of the same year, when she took only small quantities of boiled apple and milk. Thus she continued until the 10th of the following October (1867), when she ceased to take any food whatever. From this date to the following Christmas, she was given small quantities of water, in the course of the day amounting to only a few teaspoonfuls; but, since the end of December 1867, she has not swallowed any fluid. Occasionally, after coming out of her attacks, a little water is applied to her lips; but even this has not been done for the space of nine days. Since she has ceased to take any food, she has not suffered from any intercurrent attacks of illness, saving a few herpetic eruptions on her lip and an occasional headache. The last time the bowels were moved was on November 6th, 1867. She continued to pass some urine for about a month after this, and then she ceased to pass any until August 1868, when she was found occasionally to wet the blanket—about twice a week—with a small stain. She has had no secretion from the nostrils; and the skin has had no sensible perspiration, except on the hands and feet, which feel moist. In May 1867, she lost all her hair; but since then it has been entirely reproduced, and is now long. Her second dentition has been completed since her illness, and she has grown in length during this time.

State on April 7th, 1869.—She was lying in a low bed, on her back, the shoulders and head slightly raised, and her right arm outside the clothes, which she moved at will. Her face was not emaciated, but moderately full, with slight flush on the cheeks, and the nose and colour of lips natural; her features were perfect, and good-looking; the skin of her face generally was healthy; her front teeth were normal, and it was said that the remainder were so, though I did not see them. She was not able to open her mouth: she never put out the tongue. The temperature of the forehead was natural; her eyes were bright; the irides of hazel brown colour. The general aspect of her face was that of being delicate, not cachectic. As her examination required to be proceeded with cautiously, her body was not uncovered, but my hand was applied immediately to the front of the chest and the abdomen. The skin covering these parts was warm; there was no excessive emaciation felt; the abdomen was not depressed, but was of the usual position of a slender child. Occasional flatulent rumbling noises were heard in the abdomen. The whole of the right arm was seen, and the legs; the colour and texture of the skin on these parts were healthy; the hand looked delicate, and the nails well formed. The length of the right fore-arm and hand, from the point of the elbow to the end of the middle finger, was 14 inches; from the point of the elbow to the carpal end of the ulna, was 8 inches; the girth of the middle of the arm, 7 inches, and of the middle of the fore-arm, 6½ inches; the length of the whole body was 4 feet 8 inches, measured with a tape. The respiration was natural; 17 inspirations in the minute. The superficial breadth of the chest, across the level of the mammæ, was 10 inches. The pulse was feeble, but distinct, and variable, from 100 to 108 per minute. The temperature in the axilla, after three minutes' rest, was 95°; the temperature of the feet rather low. She sleeps well every night, from six to eight hours, but she does not sleep in the day. She is cheerful in her disposition. I heard her read aloud a Welsh hymn; her voice was plaintive, but moderately loud and distinct. During my visit, she had three or four attacks of unconsciousness; one was caused by the barking of a dog; she partially closed the eyelids, and remained perfectly still; the colour of the face was not altered. After two or three minutes, she heaved a sigh, made a slight sound, and seemed like one suddenly awaking from sleep.

She is once a day removed from one bed to another, for the purpose of shaking her bed; during this time she remains in a state of unconsciousness, or what they call "a fit", and does not recover until replaced in her own bed. She is clothed in a coloured flannel and calico night-dress.

The foregoing account is drawn up, after a visit to the girl, for two

objects: to satisfy the curiosity of persons at a distance who are desirous of knowing the history and present state of the Welsh fasting girl, and also to awaken the attention of those who have the leisure and the scientific ardour to visit the case, and investigate and judge for themselves. During the fortnight ending April 5th instant, she was watched by two persons night and day. The result of this will doubtless be communicated in a short time. The statements made respecting Sarah Jacobs are of such an astounding nature that belief is scarcely possible; yet accumulated evidence might produce conviction. Some attempt has been made to test the credibility of the parents of the girl, as already mentioned, by watching her closely; but the attempt came to an end for want of funds to pay for the services of the watchers. It may be stated that the girl's parents are respectable farmers, not in needy circumstances, and that they could have no motive for imposing on the public. I do not offer any explanations as to the manner in which life and growth can be maintained without ordinary food. Those who read the case will form their own theories. My office has been simply that of a narrator.

DEATHS FROM BEE-STINGS.

By D. THOMPSON, L.R.C.S.Ed., Launceston.

DEATH from the sting of a bee in our climate is a matter of such rare occurrence, that, when it does happen, it is usual to look for some unhealthy condition of the body in the individual, to account for effects which, in other instances, would be comparatively innocuous. Among men who lead lives of dissipation, or who with sedentary habits are subjected to the close confinement of large towns, it is not uncommon to find accidents of comparatively small import to produce effects of a grave character; but in persons of sound constitution, living active lives, in healthy rural districts, it is very rare to find death to result from such a trivial circumstance as the sting of a bee is generally considered to be.

In Holmes's *System of Surgery*, Mr. Busk says, in reference to the stings of the bee and the wasp: "Though painful and annoying, except in persons attacked by numerous swarms, these wounds can rarely be accounted serious. . . . When large communities of hymenoptera, however, are disturbed, and the assailant is attacked by numerous angry members, very severe consequences, and even death itself, have often followed". Dr. Handfield Jones says: "In some constitutions the vital power is weak, and is seriously affected by comparatively slight agencies; thus, it is recorded that very alarming symptoms have been produced by the stings of a bee and of a wasp." I think that the following cases, from their unusual character, are worthy of record.

On Friday, February 12th, 1869, I was hastily summoned to see Mr. P., aged 58, a retired farmer, of active habits and sound constitution, but of a nervous temperament, who, at 8 A.M., had received a sting from a bee in the neck just below the right ear. He was reported to have become very faint, and the messenger feared he was dying. On hastening to the place, which was six miles from me, I found the patient dead; and the account given me was as follows. At 8 A.M., when he arose, and before taking his breakfast, the deceased went into the garden to see to a hive of bees which he had, when one stung him. He at once came into the house, and, complaining of a strange sensation passing over him, became very faint; the faintness not passing, he walked into the garden to see if the open air would relieve it, but soon returned, feeling worse. He then sat down in a chair, became rapidly worse, and died a few minutes after. The whole period from the occurrence of the sting until his death was not a quarter of an hour. There was no swelling around the throat, and at no time any difficulty of breathing. On my arrival, I examined the neck; but, beyond a slight blush of redness from the place where the wound was said to have been inflicted, there was nothing to be seen. No *post mortem* examination was obtained.

The second case occurred about twenty-four years since, and was of a precisely similar kind. For the particulars, I am indebted to the widow.

Mr. C., aged 50, a healthy man, who, though an innkeeper, was not a hard drinker, was stung by a bee in the neck at 4 P.M. He came from the garden, where the accident occurred, into the house, and complained of feeling very uncomfortable from the sting. He then left the house, to obtain some parsley from the garden, to apply to the seat of injury; but, not returning as soon as expected, search was made, and he was found dead by the gate leading from the garden, having picked the parsley, but not being able to reach the house. In this case as well, the time from the occurrence of the accident to the period of death, was not more than a quarter of an hour.

The particulars of the third case have been kindly furnished me by the son of the deceased.

Mrs. B., aged 64, resided near Sheepwash, Devon, on May 27th, 1866, received a sting from a bee on the brow, on the left side, about 1 P.M. She was in very good health at the time; and, on previous occasions, had not suffered more than usual from a similar accident. Soon after receiving the wound, she complained of feeling very faint and of headache, and desired her son to examine the seat of injury; where he saw two small swellings, about the size of a pea each. She sat down, resting her head on her hands, with the elbows on the knees, and trembled very much. A few minutes after, she rose up, and attempted to walk across the room; but had not proceeded far, when she was obliged to be assisted to a seat, and requested that some cold water might be brought her; she then desired that she might be laid back, and never spoke after. Gurgling in the throat came on, and death followed in a few minutes. All this, my informant says, transpired in less than fifteen minutes from the reception of the sting.

The remarkable similarity in the history of each case, and the period from the injury to the occurrence of death being so short, leaves no room to doubt that the cause of death was the same in all the cases. I have evidence of some cases where symptoms of a very alarming character were produced from the poison of a single bee, but ultimately they recovered; and in all the same early symptoms attended—viz., the peculiar sensations experienced, followed by a deadly feeling of faintness, relieved by vomiting.

The only fatal case precisely similar to those which I have recorded, has become known to me through the courtesy of Mr. Hanbury, of Plough Court, Lombard Street; and the particulars were published by him, together with cases of a somewhat similar kind, collected by Dr. Edwards Crisp, in the *Medical Times and Gazette* for March 10th, 1860.

CLINICAL MEMORANDA.

[Under this head, we shall publish from time to time, as materials accumulate, short records of remarkable cases in practice which are sufficiently rare, interesting, or instructive, to deserve record, but do not call for lengthened statement or comment. Brevity and point should be the valuable characteristics of cases forwarded for this column.]

RHEUMATIC FEVER WITHOUT RHEUMATISM.

By J. J. GODFREY, Esq., Cleobury Mortimer.

LAST July, a young man sought advice under the following circumstances. For three or four days, he had been suffering from slight shiverings, aching of the limbs, and pain in the back; these had not been of sufficient intensity to prevent him from continuing his work. For eighteen hours previously to coming under observation he had felt a great uneasiness in the left side, attended by a stifling sensation and shortness of breath. Though he made somewhat light of his illness, the countenance was almost diagnostic of the mischief going on. The pulse was 110, unequal in force; the visible impulse of the heart's action was too extensive, and over the central and lower portions of the cardiac region was strong friction-sound. He was taken home, protected as well as possible, and put to bed. The next day he had considerable sour perspirations, which continued, more or less, during the rest of his illness. On the fifth day of attendance, he admitted feeling a very slight stiffness in each elbow and in one ankle. The former presented no abnormal appearance: and with respect to the latter, it was difficult to decide whether there was or was not a very slight amount of swelling. Neither were complained of spontaneously. He was convalescent in three weeks. Eight days afterwards a second attack came on, and ran a similar course, except that the main feature was endocarditis, which was not discovered during the first attack. For a few days he caused some anxiety. He was, however, completely convalescent on the fourteenth day; the two attacks, with the interval, occupying just six weeks. A somewhat similar case is recorded by Dr. Sutton, in the *Medical Times and Gazette* for 1864.

Curiously, the next case of rheumatism I attended began in the same way. A strong, healthy-grown girl was attended for general *malaise*, and an uneasy sensation in the chest. There was marked friction over the cardiac region, and within forty-eight hours many of the joints were affected, plainly indicating the nature of the disease. All cases of acute pericarditis in previously healthy people are not, however, rheumatic. Within the last fortnight, I have attended a man whose only illness, when first seen, was pericarditis. On the second day there was capillary bronchitis. He died on the fifth day. He had been complaining of chilliness and headache for four or five days before he was seen.

PROFESSOR HUXLEY'S HUNTERIAN LECTURES ON THE ANATOMY OF THE VERTEBRATA.

Delivered at the Royal College of Surgeons of England.

LECTURE IX.

To elucidate the development of the rest of the Facial Skeleton, it is necessary to return to the consideration of the embryo at the time of the formation of the cartilaginous rods in the visceral arches.

The distal part of the first visceral rod becomes segmented off as the lower jaw. Another cartilaginous bar projects forwards in the maxillary process; and two ossifications arise in it, the anterior one of which is the palatine bone, the posterior the pterygoid. This rod in the maxillary process extends forwards from the first visceral rod, and joins the capsule of the nose or the adjacent part of the base of the skull. This may be called the pterygo-palatine rod. The anterior curved ends of the cartilaginous trabeculae ossify as median and lateral ethmoid, as before described; but other membrane-bones arise in this region, such as the nasals, the vomer, and the premaxilla; while the pterygo-palatine rod becomes coated externally by those two membrane-bones, the maxilla and the jugal.

The cleft between the naso-frontal and the maxillary processes of the face becomes gradually enclosed, so as to form a canal; but this canal bifurcates superiorly; and, while the inner branch forms the nasal passage, the external one becomes the lacrymal canal, and beside it the lacrymal bone arises. Besides the lateral ethmoid, which, as we have seen, is a cartilaginous ossification, we find in the Crocodiles, many Lizards, and most Fishes, a membrane-bone which is called the prefrontal. In the same groups, another membrane-bone is developed behind the orbit; this is the postfrontal, and it is often connected posteriorly with that other membrane-bone, the squamosal. Indeed, in most Vertebrata, a peculiar system of bony bars extends between the orbit and the part which suspends the lower jaw, there being two such arcades on each side. The upper bar is formed by the postfrontal and squamosal; the lower one by the jugal, and by another bone interposed between it and the quadrate, and thence called the quadrate-jugal. In Birds, the upper arch is almost always imperfect. In Lizards, on the other hand, the lower arcade is incomplete, while the postfrontal is sometimes doubled.

The tympanic bone appears in the human fetus as a bony ring extending across the first visceral cleft and between the first two cartilaginous rods, the roots of which it thus connects together. In the Monotremes, it permanently remains in such a rudimentary condition—a mere bony ring. Rudiments of it exist in the Fowl and many Birds, but no trace of it has been found in Reptiles. It exists, however, in some Batrachians, but attains its largest size in osseous Fishes, where it is named preoperculum. The other bones of the opercular flap of osseous Fishes represent parts of the external ear of the highest animals. The operculum and suboperculum together answer undoubtedly to potential hard parts in the mammalian concha of the ear; while the outer operculum (which has so firm an attachment by ligamentous fibres to the lower jaw) is probably the homologue of the tragus.

Having now completed the survey of the development of the skull and face, the Professor began an enumeration of the more striking peculiarities presented by those structures in certain adult forms.

In that very imperfect Vertebrate, the *Amphioxus* (the essential nature of which was mistaken even by Pallas), we find the brain actually smaller than the more posterior part of the nervous centres. The skull is represented by membrane only; and it is exceedingly doubtful whether there is any true representative of the facial skeleton. There is, indeed, a cartilage on each side of the mouth and behind it—numerous clefts, separated by bars of denser tissue; but there are very many more of these than there are body-segments in the region where they are placed, and they can hardly be supposed to represent visceral clefts and arches. Again, the chorda dorsalis projects anteriorly much beyond the nervous centres; and altogether the *Amphioxus*-type must be considered as a vertebrate one, very specially modified, and one the entire structure of which our present zoological knowledge does not allow us fully to appreciate and understand.

In the Lamprey, we meet with a skull which is at once intelligible when we refer to the early primordial cranium of the chick before described. In this lowly organised fish, we find the persistent notochord embedded at its anterior end in a mass of basicranial cartilage, which, at its posterior end, ascends on each side, and meets above, so as to form