the surface of which is covered with a greasy film, also saponifiable by caustic potash. Alcohol, digested on what remained after the action of æther, dissolved only a trace of saline matter; and the residuum, after exhaustion by æther, had the appearance of thin flakes of pearly cuticle, coloured yellowish brown, insoluble in strong acetic acid, but soluble in potash, from which it was precipitated by acetic acid. A portion of these flakes, when strongly heated, left a white ash, consisting of carbonate and phosphate of lime, carbonate of soda, and chloride of sodium. The material then appears to consist of a number of hairs, with a quantity of delicate, cuticular flakes, the whole intimately mixed with a dark matter, composed as follows: a brownish, viscid, oily substance, probably containing resin; a volatile odorous principle; extractive, soluble in water, and alcohol; colouring matter, which adheres to the flakes of cuticle; lactates of soda and lime, a trace of phosphate of lime, and chloride of sodium in considerable quantity."

ART. XVI.—*Cases of Malignant Diphtheritis*. By EDWARD BEWLEY, Licentiate of the Royal College of Surgeons in Ireland.

CASE I.—Fanny, eldest daughter of the Rev. J. P. H. of C—, King's County, aged 5 years, had been for more than a month in a delicate state of health, owing to derangement of the digestive organs. On the 29th of June, 1835, she accompanied her mother to the residence of a relation, distant from her own home eleven miles, where the children of the family were recovering from severe colds, stated to have been attended by sore throat, but not of so bad a character as to render medical assistance necessary.

July 1st. This morning she complained of some soreness in the throat, but immediately forgot it. Her appetite, however,

became bad, and during this day and the next she seemed not well, though no cause could be assigned for her illness.

3rd. She was brought home in an open carriage, and on the way was exposed to a heavy shower of rain. She was inadvertently allowed to remain for two hours in wet shoes and stockings. In the night she was seized with irregular fever, sometimes burning hot, and again quite cool. She got some purgative medicine, which acted powerfully.

4th. The parents, unable to ascertain the cause of the fever, sent for me early this morning. I found her with the skin hot and dry; countenance flushed; eyes suffused; tongue white and clammy; pulse 130, full, and soft; no headach; no pain any where. Suspecting, from some peculiarity in the voice that the throat was engaged, I inquired if she felt any uneasiness there, but was answered in the negative. Compression with the finger and thumb over the tonsils produced no pain. Still not satisfied, I looked into the throat, and was astonished to perceive its state. The tonsils, uvula, soft palate, and back of the pharynx, appeared in a state of high inflammation, of a fiery-red colour; tonsils and uvula were also much swollen. From the character of the pulse I was unwilling to bleed, or apply leeches externally. Two grains of tartar emetic were dissolved in four ounces of water, and a table-spoonful given every ten minutes till the whole was taken, with a view to excite vomiting. No effect, however, was produced on the stomach till she was immersed to the hips in a warm bath, and had taken large draughts of warm water. Still the stomach was only slightly affected.

℞. Calomel.

Pulv. Jacobi, āā gr. i.

Pulv. Ipecac. gr. ss. M.

Ft. Pulvis, quartis horis sumendus.

Returned home in order to procure nitrate of silver, and in six hours saw her again. A great alteration had taken place in the throat. The back of the pharynx and left tonsil were still more

swollen, and coated with lymph. No pain, even in swallowing. The tartar emetic had produced copious evacuations from the bowels, consisting of a brownish, watery fluid, in which a small quantity of flaky matter was suspended. The symptoms in other respects were the same as in the morning.

Brushed the whole of the fauces with a solution of the Nitrate of Silver, twenty grains to the ounce. Continue the Powders.

Remained in the house all night.

5th. (6, A. M.) Passed a restless night, with continual moaning, and tossing in the bed. Pulse rather more firm than yesterday, but still, although quick, not so strong a pulse as one would expect with so much inflammation and fever. On inspecting the fauces, I found that the lymph had extended, and now covered the right tonsil, uvula, and great part of the soft palate, so as apparently to block up the whole of the passage. Still no pain; no obstruction to respiration; and deglutition performed with considerable ease.

Applr. Solut. Argent. Nit. Omitt. Pulv. Jacobi et Ipecac. Contr. Calomel. gr. i. tertiis horis.

Being unable to gargle, she was desired to inhale frequently the vapour of hot vinegar and water. The bowels being confined, she had some castor oil.

6, P. M. Castor oil was repeated twice before any evacuation was procured. Stools of same brownish, watery matter, without bile. Throat in same state internally; lymphatic glands at right side of neck enlarged externally. Had several paroxysms of sneezing in the course of the day, followed by profuse discharge of viscid mucus from the nose.

Contr. remedia. Pediluvium.

6th. Lymph increased in thickness. Uvula, with its coating, appears as large as the top of a man's thumb. Pulse 120, soft and compressible; skin moist and natural. Other symptoms same as yesterday.

Omit Calomel. Continue the application of Nitrate of Silver, and inhalation of vapour of vinegar. Poultice to external tumour.

7th. All the symptoms much worse. Discharge from nostrils more profuse; extremities cold; pulse weak and compressible, and yet no considerable prostration of strength, as she is able to sit up in bed without assistance for several hours at a time, and apparently with great ease. Very offensive smell from throat. The lymph, which previously appeared to adhere firmly round the edges, now seems inclined to separate. Alvine discharges of same character.

Contr. Argent. Nitrat. &c. Mouth to be frequently washed with a solution of Chloride of Lime. Warm flannel to extremities.

8th. Offensive odour from throat still continues. Pulse somewhat stronger. Tendency to coma, even when propped up in bed. An inconsiderable quantity of lymph had come away, but on inspecting throat it could not be perceived from what part it had come. Muscular strength still very considerable. Deglutition performed with more difficulty, but without the least pain. In consultation with my friend Dr. Molloy, it was supposed that the offensive smell proceeded from putrefaction of the lymph; and as the external swelling of the glands was increasing, it was resolved to apply three leeches to each side of the neck.

Continr. remedia altera.

9th. Leeches were applied yesterday, but did not bleed much. The drowsiness disappeared shortly afterwards, and she seemed much livelier for some time, which considerably abated the fears of her parents. This morning a portion of lymph was detached from the left tonsil, the surface of which being now uncovered, presents a livid, sloughy appearance. Lymph on uvula is partially detached; tongue cleaning round the edges, but middle coated with a brown fur. The other symptoms same as yesterday.

Contr. Argent. Nitrat. et Inhalat. Chicken broth in small quantities during the day.

10th and 11th. Symptoms and treatment pretty much the same as on the 9th. Small patches of lymph came away from time to time, underneath which the mucous membrane appeared in a state of gangrene. The chicken broth was increased in quantity, and the yolk of an egg allowed twice a day.

12th. An attempt at reaction appears to have taken place. Pulse has much more tone; countenance more lively and natural; muscular strength still scarcely diminished. Some bile in the stools, which are of a more natural character and consistence.

13th. A great change for the worse. For the first time the strength appears evidently to decline. In the course of the day she had another attack of the tendency to coma, which, like that on the 8th, totally disappeared in a few hours.

The nutriment was continued, and, in addition, a tea-spoonful of Madeira was given every second hour.

In the evening a slight intermission in the pulse was observable. The voice was much altered, (in popular language she spoke through the nose), so that she could be understood with difficulty, in consequence of which, and her mother having showed me a small piece of lymph which had been expectorated, with a slight speck of blood on it, I examined the throat, and beheld, indeed, a frightful spectacle. The lymph had nearly all disappeared, and the whole pharynx seemed involved in one slough. The uvula and part of the soft palate was completely gone, and on her attempting to swallow some fluid, part returned through the nose.

The wine, &c. were continued through the night.

14th. Evidently sinking. Pulse exceedingly feeble, and intermitting; skin dry and cool; tongue and gums coated with brown sordes. In addition to the wine and broth, the following mixture was prescribed as a stimulant;

℞ Tinct. Opii. ℥ss.

Sp. Ammon. Aromat. ℥iiss. M.

Sumat. gutt. vi. singulis horis.

These means were persevered in during the day and night.

15th. At four o'clock this morning she died, retaining her intellects perfect to the last. The urine was suppressed for twenty-four hours before death.

CASE II.—Mary Jane H——, aged $3\frac{1}{2}$ years, sister to the subject of the last case, had always been an extremely healthy, robust child. Immediately on the discovery of the disease in Fanny's throat, I caused Mary Jane, and a younger child, aged two years, to be removed to another house. Whilst there, the youngest contracted a slight sore throat, probably from teething; and her parents, supposing her to be affected with the same disease as her eldest sister, unfortunately brought both children home, under the idea that Mary Jane was equally exposed to contagion in either place.

On the 19th July she was in perfect health and spirits, and went to bed as well as ever. In the night she awoke with nightmare, and again fell asleep.

20th. At 9 o'clock this morning she awoke with burning skin and quick pulse, but made no complaint. Her mother gave her a mixture of senna and salts twice, which freed her bowels well, but produced no diminution of the fever. The stools were perfectly natural in appearance. Several times during the night of the 20th she awoke with convulsive twitchings of the head and arms, complaining of acute pains in the latter. These attacks continued about a minute each time, the body remaining rigid and stiff.

21st. I saw her this day, and found that she had arisen perfectly free from fever; pulse 90; skin cool and natural; tongue clean; spirits good; but she was rather pallid, and with little or no appetite. I ordered no medicine, as the purgative which she took yesterday had not long ceased to operate. I examined

the throat most carefully and minutely, but the mucous membrane was quite pale, and looked perfectly natural.

22nd. This morning I had a note from her father, mentioning that he had discovered the cause of the fever on the 20th in a *boil* which had appeared on her back, and that he had given her some medicine for it. In the course of the day fever again made its appearance; the medicine given in the morning acted on the bowels, but the discharges, instead of being natural, as on the 20th, presented the same appearance as those which accompanied the disease of her sister, viz. a brownish water, containing some white flakes, and apparently without bile. In the evening I heard that her father had discovered that the throat was inflamed, and a patch of lymph on the left tonsil. I lost no time in visiting her, and found the throat as it was described; skin hot and dry; pulse 108, exceedingly weak and compressible; countenance indicative of anxiety and languor; no pain or difficulty of swallowing; no headach; tongue a little whitish. I immediately brushed the fauces with a solution of nitrate of silver, thirty grains to the ounce, which was repeated every third hour, and directed a table-spoonful of chicken broth to be given every second hour during the night.

23rd. (4, A. M.) The lymph has come away from the left tonsil, leaving the mucous membrane perfectly clean; but a small patch has made its appearance on the right tonsil, and the whole fauces are rather more swollen than last night; pulse 120, with rather more tone than when she commenced the broth. I left my patient to the care of Dr. Molloy, and set off for Dublin to consult Dr. Graves, whom I saw at 5, P. M.; and as soon as possible after receiving his advice returned home.

24th. (A. M.) Disease progresses. Left tonsil again partially covered with lymph, as are also right tonsil, uvula, and back of the pharynx. Pulse same as yesterday; skin of natural heat, and *moist*; tongue very much furred. The broth was regularly persisted in during my absence, and the bowels freed by castor oil.

Contr. Argent. Nitrat. 6tis horis. Contr. Jusculum. Applr. Vesicat. nuchæ. Sumat Liquor. Chlorid. Sodæ gutt. iv. 4tis horis. Habeat Enema ex Sulph. Quininæ gr. ii. cum Amylo bis quotidie.

10, P. M. Throat, pulse, and tongue in same state. Blister rose well. The first enema was retained; the second rejected almost immediately. Is sleeping quietly at present.

Wash throat with Chloride of Soda.

25th. (4, A. M.) Lymph over the whole fauces has increased in thickness; pulse 120, rather improved; tongue coated with brownish fur; sneezed twice or thrice, and had slight mucous discharge from the nose; speaks *thick* for the first time.

Contr. remedia ut heri.

As the enema containing quinine could not be retained, I substituted one grain three times a day by the mouth in lieu of it.

5, P. M. Discharge from nostrils has ceased; tongue very moist, and cleaning round the edges; constant trickling of limpid fluid from the mouth; slept quietly about two hours during the day; skin soft and moist.

Beef tea.

11, P. M. There has been a slight discharge from the nostrils once or twice since last report, but it has again ceased. On attempting to drink, part of the liquid was coughed up through the nose. Pulse and tongue as in the morning. Bowels have not been relieved for twenty-four hours; abdomen rather full; urine scanty.

Repetr. Chlor. Sodæ faucibus. Habt. Enema laxat. Contr. Jusculum bovinum, &c.

26th. Had rather a restless night; enema operated well; stool natural; sonorous, gurgling respiration, as if from mucus in the nose, and increased discharge from nostrils; countenance puffed and swollen; eyes dull and heavy. Lymph, as far as can be ascertained by inspection of the throat, has not extended;

however, the speech would indicate that the nose is more engaged.

Contr. remedia.

5, P. M. No amendment since last report; on the contrary, she seems rather worse. Increased discharge from nose, and more gurgling and sonorous respiration. Pulse 120, more compressible.

Throat was brushed with a mixture of one part strong muriatic acid, and three parts honey.

Midnight.—No alteration in local symptoms; general appearance improved; face less swollen; eye more lively; tongue cleaning, and very moist. Expresses some desire for food; has taken beef-tea several times to-day. Is covered with warm perspiration. Pulse 120, somewhat firmer.

27th. (7, A. M.) Has had a restless night, with tossing of limbs, and little or no sleep; respiration louder, and appears more difficult than before, interrupted by occasional *sobs*; pulse 120, feeble; abdomen full, but soft; no stool since yesterday morning; discharge from nose occasionally profuse, and at other times suppressed; tongue still very moist; trickling of mucous fluid from mouth.

Habt. Enema laxat. Contr. remedia altera. Sulph. Quininæ, gr. iss. quater in die.

7, P. M. Enema operated well; stool natural; appeared considerably livelier after it, and continued so for several hours. Is now very languid and dull. No discharge from nostrils; skin soft and moist; no alteration in local appearances. Has taken a large wine-glassful either of strong beef tea or jelly every fourth hour. Abdomen still rather tumid.

Repr. Enema.

Midnight.—Had a good natural stool from the enema. Is now asleep. Interrupted, irregular respiration, though less loud than hitherto; considerable gurgling in the throat; pulse a little stronger than at last report.

28th. (7, A. M.) Some sign of muscular debility for the first time; pulse 120, more and more compressible; voice much weaker, but not hoarse; great appearance of languor; bled from the nose about a drachm; no mucous discharge from nostrils since yesterday morning; mouth and tongue still very moist, but of a very dark colour, perhaps owing to some blood having got into the mouth. Lymph in the throat appears more flocculent, and a small piece came away; abdomen full and soft.

Repetr. Enema. Broth and jelly every third hour. Contr. Quinine et Chlor. Sodæ. Two tea-spoonfuls of Madeira twice a day.

Noon.—Two natural stools from enema; urine in tolerable quantity, a little higher coloured than usual; skin cool.

6, P. M. Better in every respect; pulse more firm; countenance more lively. At one o'clock nose bled again.

11, P. M. Constitutional symptoms still continue more favourable, but since last report voice has become very hoarse, with a peculiar croupy sound, chiefly remarkable during a sudden inspiration as in crying. Inhaling the vapour of vinegar and water appears to relieve the symptom for the time. During sleep she breathes quietly.

29th. (7, A. M.) Slept well last night, and appears better this morning, were it not for the hoarseness and croupy cough which continue. She used the inhaler twice in the night.

Contr. remedia. Enema laxat.

6, P. M. Enema produced a tolerable motion; croupy symptoms have been gradually increasing during the day; voice more and more hoarse; cough more frequent; inclination to drowsiness and somnolency; countenance dull; eye heavy; had slight epistaxis twice in the day. Nevertheless, the pulse and muscular strength are improved; no discharge from nostrils; respiration during sleep less distressing; abdomen full, and rather tympanitic.

Enema Cathart. Sumet Calomel. gr. ss. singulis horis.

11 P. M. Enema operated inefficiently, and two drachms of castor oil were given, which has affected the bowels. Symptoms same as at last report.

30th. (8, A. M.) Slept soundly and quietly the whole night, except when awakened to take medicine or nutriment. Calomel was continued during the night till seven this morning. Croupy symptoms still continue, but are not urgent. The cough recurs at long intervals, and there is no difficulty of respiration; voice almost extinct; strength sinking rapidly; pulse very weak and thready, but regular; no offensive odour from throat. Calomel seems inclined to run off by the bowels.

Omit Calomel for two hours. Continue nutriment. Wine and Water occasionally.

3, P. M. The calomel was again resumed at ten o'clock in doses of a quarter of a grain every half hour, with a drop of tinct. opii with every second dose to prevent purging. Mercurial ointment was also directed to be rubbed on the neck and arms.

Nutriment, Wine, and Quinine to be persisted in.

10, P. M. The above remedies have been strictly adhered to, but without any beneficial effect. Pulse has again rallied, and the strength returned, so much so, that the patient is able to sit up, or even stand in her bed; but the affection of the larynx continues steadily to increase. Respiration sibilant; cough more frequent; and voice hardly perceptible. Lies supine, in a state of stupor. Mercury has produced no sensible effect, but has not acted on bowels since combined with opium.

Contr. Calomel. gr. ss. sing. horis, *sine* Tinct. Opii, et Ung. Hydrarg. Cum cæteris remediis.

31st. (6, A. M.) Continued to take the calomel up to three o'clock this morning, when it was suspended, owing to the jaws having become swollen, the pulse getting more feeble, and the extremities cold. At this hour the pulse has regained its former strength, but there is no appearance of any diminution of the

disease in the larynx. Respiration is becoming more difficult; cough more shrill. She lies in a state of insensibility, from which she is roused with difficulty. Refuses nourishment, and if compelled to take it, swallows with a very painful effort, and by very small quantities at a time. Skin moist; feet warm.

From this time she continued rapidly to grow worse; the respiration became more and more difficult; the countenance flushed, and afterwards livid, and the pulse intermitting, and scarcely perceptible. At eight o'clock in the evening death closed the scene, for some time previous to which she struggled violently, as if gasping for breath.

CASE III.—I am not able to afford more than a general outline of the progress and treatment of the following case, as owing to other professional engagements at the time, I was not the person in constant attendance on the child, but merely visited her occasionally in consultation with two other medical men, who had the charge of the case.

Louisa H—, aged 2 years, had been from birth a puny, delicate child. She had been exposed to precisely the same risk of contagion as her sister Mary Jane, (the subject of the preceding case), and yet the disease did not appear in *her* throat till the 10th of September, when it was accidentally discovered. She had been removed from home at the time the disease appeared in Mary Jane, and had never been in the house where she died afterwards. The premonitory symptoms were pretty nearly the same as in the two former cases, namely, a slight febrile attack two days before the appearance of the lymph, which lasted about twelve hours, and then disappeared, leaving the child apparently as well as before. This feverish attack was attributed partly to teething, and partly as the consequence of an eruption which had been on the little patient's head and left ear for more than two months, but latterly had become more inflamed and irritable.

I saw her on the night of the 10th September, and found that previously to my arrival the physician in attendance, Dr. F.,

had applied a blister from ear to ear. There was a small patch of lymph, not larger than a split pea, on the left tonsil, and the rest of the fauces were of a bright red colour. The next morning (11th) the lymph had extended over part of the back of the pharynx, but not in any considerable degree. The constitutional symptoms were the same as in the preceding cases: extreme weakness and compressibility of the pulse, but no corresponding muscular debility; countenance more than usually pallid; appetite and digestion almost unimpaired, and slept as well as usual.

On the 12th Mr. Jameson of York-street, Dublin, arrived at the house, and remained with her constantly till her death. Previously to his arrival, and without my knowledge, Dr. F. had dressed the blistered surface with tartar emetic ointment! Mr. Jameson's plan of treatment was afterwards rigidly adhered to, viz. the throat was rubbed twice a day with a stick of nitrate of silver; two grains of calomel were given every second hour till upwards of eighty grains had been taken; and with a view to get the constitution more rapidly under the influence of mercury, an ounce of mercurial ointment was rubbed into the legs and arms. Tonics and stimulants in large quantities were also administered; strong beef-tea almost every hour; from ten to sixteen grains of quinine, and four ounces of brandy in the twenty-four hours. Notwithstanding, the mercury produced little or no effect. The gums were scarcely affected, and there was a very faint mercurial foetor of the breath. The disease in the throat, meanwhile, which had not at any time been of much extent, began evidently to diminish. The quinine and brandy seemed to produce literally no effect whatever. On the 15th the blistered surface was discovered to be in a state of gangrene. It was dressed with various stimulating applications, but without any beneficial result. The pulse continued to grow more and more feeble, but the muscular strength did not decline in the same ratio, as she was able to run about the room the day of her death, which took place on the 18th.

There was a post-mortem examination, at which I regret I was unable to be present. I understand the lymph had entirely disappeared from the throat, which seemed in a perfectly healthy state.

I have been, perhaps, tediously minute in my history of these cases, but I hope not unnecessarily so. The disease, though exceedingly rare in the country, is of great importance on account of its deadly nature, and, I am convinced, is not as yet sufficiently understood by the profession. As far as I know there is no English work which gives any adequate account either of the symptoms or the appropriate treatment. Some French authors, Bretonneau, Guersent, &c. appear to have devoted considerable attention to the subject. The latter, in the "Dictionnaire de Medecine," has given a beautifully minute pathological description of the disease, which he terms "*Angine comenneuse asthenique*," but has totally overlooked the constitutional symptoms, especially those of a premonitory nature; and his hints as to treatment are excessively meagre and unsatisfactory. For these reasons I have given the above cases (particularly the two first) at such length, as it is only by possessing an accurate knowledge of all the symptoms in every stage of the disease that the practitioner can hope to ascertain the most appropriate treatment.

On a careful perusal of the above cases, there are several circumstances, which will appear worthy of remark.

1st. The extreme insidiousness of the disease at the commencement. In fact, at first there was scarcely any thing which could induce a suspicion that the throat was affected at all. The patients complained of no pain or uneasiness in the throat, or difficulty of swallowing. They had a slight feverish attack for about twelve hours, which had totally disappeared for two days before the accession of inflammation or appearance of lymph.

2nd. The extraordinary nature of the pulse as compared with the muscular strength. In all the cases, from the very beginning, the pulse was as weak and compressible as if the patients were in the last stage of typhus fever ; while the muscular strength held up almost unimpaired till within a day or two of death.

3rd. The nature of the alvine discharges at the commencement of the attack, which I have described as being a brownish water, containing some white flakes, and *without bile*.

4th. Taking into account the short time which intervened between the accession of the disease and death, we might expect that the constitutional disturbance would have been much more considerable than it was. Except in the second case, where the disease had evidently extended to the larynx, there was nothing in the constitutional symptoms which would indicate that the patients were in such extreme danger. The sensorial functions were wholly unaffected ; the patients slept soundly and quietly ; the appetite was tolerably good, and the digestion well performed. During the greater part of each day, the children seemed as lively and cheerful as ever, sitting up in bed, and playing with their toys. The youngest child was not confined to bed at all, but was actually running about the room the day of her death.

5th. The tonic and stimulant plan of treatment is generally considered the most applicable to this disease, and certainly the condition of the pulse would seem to indicate no other. But how are we to reconcile this with the fact that the eldest child, who had been previously in ill health, and who had been treated in the beginning rather antiphlogistically, lived two days longer than the second, who was always a stout, healthy child, and three days longer than the third, although the two last were treated on the stimulant plan from the commencement of the disease.

6th. *Gangrene* is considered a very rare termination of this disease. Bretonneau denies that it ever takes place. This I

am enabled to contradict from the first case, in which the uvula and part of the velum palate sloughed away.

7th. It may not be uninteresting to notice the evident infectious nature of the complaint. There is no way in which I can account for its communication to the two younger children, except by contagion. The disease was not epidemic at the time, nor has there been another case in the neighbourhood since.

The above remarks I throw out for the consideration of my medical brethren. I do not presume to say what is the best plan of treatment, but I am rather inclined to think that the active use of mercury from the very outset offers the fairest chance of success. The experience of case three proves, at all events, that it may be tried with perfect safety.

ART. XVII.—*Observations on diffuse Cellular Inflammation, with some Remarks on Contagion.* By CHARLES LENDRICK, M. D., T. C. D., King's Professor of the Practice of Medicine in the School of Physic, one of the Clinical Physicians of Sir Patrick Dun's Hospital, Physician to Mercer's Hospital, &c.

IN considering this and other diseases affecting the *cellular tissue*, whether external, or as it exists as the internal bond of union, sufficient consideration has not been afforded to its *vital* properties, a reference to which might often diminish the difficulties connected with the phenomena. The cellular tissue is, in the words of Meckel, "the coagulable fluid in a state of coagulation;" the subsequent state of that, which originally constituted the elements of the foetus; and the frame-work by which the different viscera were formed. It would be extremely unphilosophical to conclude, that properties so marked as these, and vested in a particular tissue, should cease on the human being attaining maturity; and we are not to conclude that parts of little