

PART III.

MEDICAL MISCELLANY.

Treatment of Aneurism by Compression. With Editorial Remarks.

IN the Statistical Report of the principal operations performed during the quarter ending June, 1855, in the provincial hospitals of England, as given in the Medical Times and Gazette of the 13th of October, we find the following result of cases of aneurism recently treated by compression. Four cases have been subjected to this treatment, viz., one in the North Staffordshire Hospital, one in the Bradford Hospital, one in the Durham Hospital, and one in the Leeds Infirmary; and of them mention is made as follows:—

“CASE I.—A collier, aged 26, in good health, was admitted, under the care of Mr. M'Munn, into the North Staffordshire Hospital, on account of a popliteal aneurism, the size of a turkey's egg. It had existed for three months. Treatment by pressure was at once commenced, and was carried on without interruption for three weeks, at the end of which time the tumour had ceased to pulsate, and had become solid. The man was subsequently discharged quite recovered.

“CASE II.—A robust and healthy man, aged 29, under the care of Dr. Bennett, in the Bradford Hospital. An aneurism, the size of an egg, existed in the left popliteal space, and had probably been present for about three weeks, as the man stated he had felt pain in the part during that time. It pulsed forcibly, and was increasing rapidly in size; there was some œdema of the leg. Firm pressure on the femoral completely controlled its pulsations. Compression treatment, by Carte's apparatus, was commenced on the 26th of June, and was steadily continued through July and August. The man was patient, and bore the pressure well, both night and day. It was, in a general way, kept up quite efficiently,—i. e., so as to prevent all pulsation in the tumour; at times, however, a feeble flow of blood would be permitted. The man had been allowed good meat diet, without restriction as to fluids. A free daily action of the bowels had been secured by the sulphate of magnesia, and for a week or two digitalis had been given; but the latter, causing inter-

mittent pulse, was not continued. In spite, however, of these measures, the aneurism got much larger during the trial of compression; at times it would appear to be solidifying in parts, but, on the whole, the pulsations continued as forcible as ever. The compression was laid aside on September 1, and the man was then allowed to get up. The tumour, however, increased still more while walking about; and on September 7, accordingly, he was again ordered to confine himself to bed. On September 14 the femoral artery was tied. At this time the tumour filled the whole popliteal space, pushing aside the hamstring tendons; there was, also, considerable œdema of the leg. The ligature succeeded well. During the succeeding night, the temperature of the foot fell considerably, but, on the application of a hot bottle, its heat was soon restored. The ligature came away on the thirteenth day, and on the same day the pulsation was detected in the anterior tibial. The tumour has already decreased much in size, and become solid in most parts. Under treatment.

"CASE III.—A florid, healthy-looking man, aged 29, was admitted into the Durham Hospital, under the care of Mr. Shaw, on account of an aneurism in the right popliteal space. For the past two years he had worked as a 'navvy,' having been dismissed from service in the army on account of disease of the heart. There was a loud diastolic bellows murmur audible over the base of the heart. Mr. Shaw determined to employ the compression treatment, and a Weiss' screw tourniquet was accordingly applied; it was not, however, found to suit, as it frequently slipped. The man himself next devised a method which was found to answer very well. It consisted in placing a piece of deal board, well padded, under the thigh, on its outer side, and a second, perforated by two holes, over the course of the artery; these were strapped in position with moderate tightness, and over them two common tourniquets were placed, so that their screws, padded at the ends, might dip into the holes in the board over the artery. These kept well in place; and by one or other screw, alternately, the artery was efficiently controlled. On the evening of the third day, an attack of excruciating pain occurred in the tumour and down the leg as far as the foot. On the fourth day the tumour was found to be solid and quite pulseless. The tumour has since been gradually getting smaller.

"CASE IV.—A man, aged 34, is under Mr. Teale's care in the Leeds Infirmary, on account of a large popliteal aneurism. Compression treatment was tried for thirty days, and, having failed, the artery was ligatured."

Four cases, we see, have been recorded: in two instances, compression succeeding; in the other two, failing to produce cure, and the ligature being resorted to instead.

In commenting upon these cases the first point that attracts our attention is the satisfactory conclusion, that already this mode of treatment in external aneurism has become general throughout England, and that success is attending its employment in a very

large number of the cases subjected to it (indeed in those before us to one-half, or 50 per cent. of the whole), although this success, as compared with that of Dublin, is still very far behind. *Here* we seldom have a failure. We have recently had four cases (in hospital and private practice) in this city, and all have had a favourable termination.¹ Cure of the aneurism has followed in three instances (one, that of a medical man), and in the fourth recovery has so far ensued, that the man is walking about without inconvenience or pain, the tumour in the ham having subsided and contracted into about one-third of its original size.

This success we can only attribute to the principles upon which compression should be adopted and conducted being thoroughly understood in Dublin; to the marked attention paid by the Dublin surgeons to the progress of each case; and to the steadiness with which they carry out the treatment when once satisfied of the curability of the aneurism.

The second point to which our observations are directed is, we regret, of a less pleasing nature. It is that of the case in the Leeds Infirmary, No. 4. This case, if left unnoticed, might be damaging to the cause of compression, and we cannot, therefore, but draw attention to it; whilst further, in reference to the ligature, it has not been fairly reported, the impression given being that recovery took place, whilst in reality death from pyemia ensued. It is thus reported in the *Medical Times and Gazette*:—"Compression treatment was tried for thirty days, and having failed, the artery was ligatured;" whilst further on, under the head of ligatures of arteries, it is stated, that "a month's trial of compression treatment having failed to benefit it, it was determined to put a ligature on the femoral; this was done, with immediate relief to the man's sufferings."

Now the *Medical Association Journal* of the same date gives a very different termination to the case. It says:—"August 15th. He is very feeble. 17th. He feels very ill, and is much exhausted. 18th. Died this morning." The former mode of expression may certainly be the more delicate way of announcing the result, and, therefore, to be adopted in preference in some cases, but, as blunt persons, we certainly must say we prefer the latter as being equally correct, and more definite, for "Died this morning" leaves no possible doubt as to how the case ended; whilst "Done, with immediate relief to the man's sufferings," induces a belief that cure followed the use of the ligature.

We next object to the use of compression in this case at all. In the report of it, as given in the *Association Journal*, we read, that before any treatment was adopted, "the tumour suddenly became much larger, more superficial, and obviously fluctuating near the surface," and, though rigors supervened, yet, until "there was another sudden increase of size of the tumour, and the pulsation in its deeper part was greater, and the patient very uneasy and restless," compression was employed.

Now it is through such ill-judged employment of compression,

and obstinate perseverance in its use, that this most valuable mode of treatment is likely to be brought into disrepute. We select this instance for criticism and why? Because we can do so in the case of a man whose general character as a surgeon stands deservedly very high; who, in the general knowledge of his profession, is not to be excelled; and yet, in this instance, seems to be totally unacquainted with the principles which have been laid down for the adoption of compression by those surgeons who have specially written upon it.

Had Mr. Teale consulted any Dublin work on this subject, such, for instance, as that from which we quote*, as to the cases in which pressure should be employed, and where we should resort to the knife, he would have found that, "*It is not advised in cases which are rapidly increasing in size, or where they continue to do so after compression has been tried.*" These aneurisms have no distinct sac, and to afford any chance of saving the limb, the blood through the main channel *must be cut off, and at once*, by securing the vessel."

No language can be plainer, and had this advice been followed soon after the man's admission into hospital on the 24th of May, in all probability we should have read a different termination to the case than that which the Association Journal gives, viz., "That a large abscess, containing clotted blood, occupied the ham; the pressure of the aneurism had caused absorption of the head of the tibia and fibula; the femoral vein was filled with clotted blood, fibrin, and pus; a large abscess in the right iliac fossa, and numerous purulent deposits in the lungs."

In justice to the treatment of aneurism by compression, we feel called upon to direct the attention of surgeons to the necessity of using judgment in the selection of proper cases for its employment, and to raise our veto against its indiscriminate adoption in cases—such as that before us—which are unfitted for its use.

On the Pancreatic Secretion. By Professor C. SCHMIDT, of Dorpat.

HAVING failed in some attempts to produce permanent adhesion between the excretory duct of the pancreas and the adjacent abdominal parietes which had been penetrated for the purpose, in order to draw off the secretion externally, and so obtain the most reliable data possible from which to infer the part played by it in the process of digestion, we were compelled a few years ago to content ourselves with the establishment of temporary fistulæ. We then arrived at the conclusion that it is destined partly to effect the change of the starch contained in the several aliments into gum and sugar, partly by its participation in the intermediate intestinal circulation to assist with the other intestinal glandular secretions in promoting the rapid movement of the fluids within the body, but

* Tufnell on the Treatment of Aneurism by Compression, p. 45.

that it does not co-operate in the digestion of albuminates or fats, the first of which is accomplished by the gastric juice, the latter by the bile. Lately, however, Dr. Weinmann, of Zürich, has succeeded, under Ludwig's direction, in establishing permanent pancreatic fistulæ in dogs, and in collecting considerable quantities of the secretion. The remarkable difference between the perfectly clear and easily flowing liquid so obtained, and the fluid thick as oil and resembling albumen, collected by us in drops immediately after the operation, from the pancreatic duct by means of the introduction of silver canulas, as regarded both their concentration and their absolute quantity, induced us to resume the investigation.

Our recent experiments confirm both those of our Zürich friends and our own earlier investigations, so far as the fluids were collected in a similar manner.

The pancreatic secretion collected after the operation contains from 10 to 12 per cent. of solid matters, of which 9 or 10 are organic (pancreatic diastase), and 0·8 or 0·9 per cent. inorganic bases and salts; the same taken from the permanent fistula contains from 1·5 to 3·6 per cent. of solid matters, of which 1·5 to 2·3 are organic (pancreatic diastase, &c.), while 0·62 to 0·75 are inorganic bases and salts; for each kilogramme (about 2·2 lbs. avoirdupois,) of the animal body we obtain by the former mode, from 0·1 to 0·2 grammes, and by the latter, from 3 to 5 grammes within an hour. As to the analyses of the former, we may refer to our previous communications, the result of which we will, at the conclusion of this paper, compare with that of our more recent experiments.

The pancreatic secretion, obtained from a well-healed permanent fistula, is a clear colourless fluid of strongly alkaline reaction, having a sickly alkaline taste, and no peculiar odour. Its density is from 1·010 to 1·011; it froths strongly when shaken, converts starch-paste at 37° C. (98°·6 F.) immediately into gum and sugar, decomposes fats, becomes turbid at 70° C. (158° F.), and at 72° (161°·6 F.) completely coagulates in white flakes. It is coagulated by alcohol and pyroxylic spirit; the coagulum (pancreatic diastase) is soluble without opacity in distilled water, and decomposes starch and butter like the original secretion. This decomposing power is removed by boiling, as also by the sulphuric, hydrochloric, nitric, and metaphosphoric acids, and bichloride of mercury, which form dense white precipitates with it; while the addition of a few drops of acetic, sulphurous, or tribasic phosphoric acid, or of water of potash or of ammonia, hinders the action, without producing turbidity or precipitate. The addition of the latter two, or of a larger quantity of the alkaline carbonates, prevents the coagulation by heat. Chloride of iron gives a light-brown precipitate, salts of copper a light-brown flaky one, iodine and hydriodic acid yield dense rust-coloured, chlorine and bromine, yellow precipitates; both fluid and precipitate have lost the fermenting power. The salts of strychnia, morphia, and cinchonia, on the contrary, salicine, urea, amygdalin, ether, hydrocyanic acid, bile, and pure crystallized gly-

cocholate of soda, do not in the least interfere with this action. Neutral acetate of lead gives a dense white flaky precipitate, partially soluble in an excess of the precipitant; both precipitate and solution act on starch. The pancreatic secretion is not altered by the addition of gastric juice; its action on starch remains uninjured. A solution of grape sugar mixed with it and isolated over mercury remains unaltered; at the end of three weeks a development of carbonic acid sets in, continues for a few days, and then ceases; the previous alkaline reaction of the mixture is changed into an acid one; the smell on opening the apparatus after two months is not unpleasant; there is no trace either of putrefaction or of the formation of butyric acid. Amygdalin kept for two months in contact with the pancreatic secretion remains undecomposed; urea at first continues unaltered, but after two or three weeks is gradually changed into carbonate of ammonia.

Below 32° F. transparent gelatinous coagula, resembling the mullage of quince seed, separate before solidification, which, in comparison to the rest of the fluid, are more weakly alkaline, and show a stronger action on starch. When dried *in vacuo* in thin layers on glass discs, or flat saucers over sulphuric acid, the secretion forms colourless transparent masses resembling lip-glue, which, when placed in water, again swell up and form a clear solution, the action on starch remaining almost uninjured. If the desiccation takes place in thicker layers, and at a temperature of from 30° to 50° C. (from 86° to 122° F.) a considerable portion is decomposed, and the fermenting power is proportionably diminished.

As to the amount of the pancreatic secretion, the author deduces, from numerous experiments, that in animals of the same species, the relative quantity of the secretion is directly proportional to the demand for nourishment, or, in other words, for respiration and warmth; the larger the animal, so much the less proportionably is the loss of warmth to be replaced by respiration and food, and, accordingly, the quantity of secretion to be furnished by the intestinal glandular system is likewise proportionably less.

On the average of six estimations, it would appear that one gramme of fresh pancreatic secretion, containing 0.021 of a gramme of anhydrous substance, of which 0.014 is organic matter (pancreas-ferment), and 0.007 inorganic bases and salts, digested for half an hour at 37° C. (98°·6 F.), with an excess of starch-paste, converts 4.672 grammes of anhydrous starch, so that one gramme of dry pancreatic diastase is sufficient, under the circumstances described, to render 333.7 grammes of anhydrous starch capable of being absorbed by the intestines.

The author gives a Table exhibiting a comparison between the mean results of three experiments on pancreatic juice obtained from a permanent fistula with those of the examination of a specimen yielded immediately after operation by a temporary fistula. The following columns contain the essential part of his results.

I. Yielded by the permanent Fistula. (Mean of three Experiments.)		II. Obtained immediately after the operation from the temporary fistula.
Water,	980.45	900.76
Solid matters,	19.55	199.24
Organic substance (ferment),	12.71	90.44
Inorganic bases and salts,	6.84	8.80
Soda (combined with ferment),	3.31	0.58
Chloride of sodium,	2.50	7.35
Chloride of potassium,	0.93	0.02
Phosphate of lime,	0.07	0.41
Phosphate of magnesia, with traces of oxide of iron,	0.01	0.12
Phosphate of soda (tribasic),	0.01	
Lime (combined with ferment),		0.32
Magnesia (combined with ferment),	0.01	
	6.84	8.80
Density,	1.0106 of one specimen	1.0306

The considerable difference exhibited above cannot be explained by mere aqueous absorption in consequence of operative interference, nor by watery evaporation during the collection of the secretion. Had either of these been the cause of the difference, the amount of organic and inorganic matters would have been contemporaneously and rateably increased, whereas the former disproportionately preponderate over the latter. To explain the discrepancy, the author feels himself compelled to assume provisionally a reflex action of innervation on the process of secretion similar to that incontestably demonstrated by Ludwig in the case of the salivary glands, and by Bernard in that of the kidneys after irritating the glandular tubuli, or the origin of the vagus in the brain; "provisionally," however, he repeats, for a wide extent of rigid investigation must lie between the mere fact and its rational explanation.—Condensed by the Translator from the *Annalen der Chemie und Pharmacie*. Band xcii., 1854, p. 33.

*On some singular Nervous Affections due to a slow Poisoning by
Nicotine, inhaled during Smoking.*

SIEBERT describes, in his Memoir on the Diagnosis of Diseases of the Abdomen, a work which has just issued from the press, the pernicious effects of the use of the cigar. These effects depend on a slow poisoning by nicotine, and constitute serious affections of long duration, the causes and origin of which usually escape the notice of the

practitioner, and determine the failure of the various modes of treatment employed.

Berzelius had already shown that cigars contained more nicotine than ordinary cut tobacco. In consequence of the mode of preparation which tobacco cut up for the pipe undergoes, the nicotine in it is already reduced to its minimum of activity. But this is not the case with the leaves destined to be converted into cigars; the latter, in fact, are not subjected to the same preliminary preparation. Accordingly, it is chiefly in consequence of the use of cigars that the affection to which we are directing attention is observed, and which consists in a very obstinate neurosis, slowly developed, under the influence of the continued ingestion of very minute quantities of nicotine. This neurosis takes the form of an irritation of the spine, and produces, according to the point of the spinal marrow principally affected, different eccentric phenomena, such as bronchial spasms, a feeling of suffocation, palpitation of the heart, gastrodynia and vomiting, mesenteric neuralgia, &c. As examples of this slow intoxication, we shall cite the following cases reported by Siebert:—

A very robust man, aged 30, was from 1840 to 1845 liable to nervous attacks of the most varied kind, such as numbness of the forearms and hands, palpitations, hypogastric oppression, want of appetite, and even vomitings; spasms of the sphincter ani, and nocturnal seminal emissions, followed by great depression. The motor power of the lower extremities was from time to time disturbed; deambulation, as well as ascending a height, became uncertain; vertigo and double vision were superadded. These symptoms, at first attributed by Siebert to hyperemia of the spinal marrow, were combated by cupping, leeching, and purgation, but they only got worse. Preparations of iron always gave relief, but without producing a complete cure. Siebert then insisted that his patient, who was in the habit of smoking a number of cigars of good quality, should abstain from them for at least four weeks. At the end of this time he felt himself quite another man. To complete his cure, he repaired to the chalybeate waters of Steben, which strengthened him much, and from which he returned completely restored. During the winter of 1845, he was tempted to smoke a cigar, when the symptoms above described immediately returned, and only yielded to the use of iron, continued for four weeks.

The second case was that of a man of cachectic and almost mummified aspect, who consulted Siebert for total loss of appetite. The only time at which his state was at all supportable was after smoking a very strong cigar. He was attacked regularly every afternoon with violent colicky pains, which lasted several hours. Purgatives were tried without success. For years he had tremors and weakness in the extremities, palpitations of the heart, and sometimes vomiting; for some months past he had, in addition, complained of a disagreeable sensation, like a blast, in the lower part of the spinal column, combined with intestinal pains recurring daily, commencing each

time in the umbilical region, spreading through the entire abdomen, and becoming concentrated in the back; these pains were intolerable, rending, crushing, but ceased during the night. He was not subject to vomitings at other times, nor was there any derangement of the alvine evacuations. From the time that he gave up the use of cigars the symptoms entirely ceased; but not being able to deny himself the enjoyment of smoking beyond four weeks, he resumed the habit, and the pains returned.

It is not every kind of cigar that produces these effects—those of a fine and narcotic description are generally the most injurious. Neither are all smokers subject to the poisonous effects. We may, however, assert that nervous affections occur more frequently in men, since the cigar has displaced the pipe. It is often very difficult to ascertain the causes and origin of the disease, for enthusiastic smokers deceive both themselves and their physicians; and, what is worse, the symptoms produced by poisoning with nicotine are sometimes quickly dissipated by the use of the cigar, just as those due to opium often yield to a fresh dose of the narcotic.

Strong cigars at first excite the appetite and, after meals, favour stomachic digestion, which circumstance induces the true smoker to fly to his cigar immediately he has swallowed the last morsel. These individuals ought carefully to avoid any derangement of digestion. The appetite and the digestive powers soon diminish, enteric pains become developed, and at the end of a short time constitute true neuralgic paroxysms.

The *Allgemeine Medicinische Central Zeitung*, from which this article is extracted, adds the following note:—"Our colleague, Dr. Ravoth, has verbally informed us, that he has seen a case of intoxication by nicotine in a physician already advanced in life, who smoked much, but the pipe."—*Journal de Médecine de Bruxelles*, and *Revue Médico-Chirurgicale de Paris*, July 1855, p. 31.

[We meet very commonly with a similar train of nervous symptoms amongst the lower classes of this country, many of whom smoke common tobacco to excess. And our lamented friend, the late Dr. Graves, was so severely affected with vertigo and other nervous symptoms from smoking a cigar that during the last four or five years of his life, he was compelled to abandon the practice altogether. —Ed.]

Two Cases of Fatal Poisoning with Phosphorus. Communicated by
DR. REISIG, Imperial and Royal District Physician at Vöcklabruck.

As post-mortem examinations in cases of poisoning with phosphorus are rare, I take the opportunity of publishing an abstract of the judicial autopsies of a man and woman (Jacob and Theresia Schobesberger), of whom the woman was poisoned with lucifer matches by the man, and at the end of eight days the man when arrested poisoned himself, probably in the same manner. Both died after an illness of four days. The similarity of the phenomena in the two bodies is striking, although the man took the poison only in small

quantity, as the smell of phosphorus in his stomach was but faintly perceptible.

Theresia Schobesberger.

External Condition of the Body.

The hair easily extracted, as in poisoning with arsenic. Mucous membrane of the mouth very pale.

Internal Condition of the Body.

a. *Cavity of the Abdomen.*

1. The outer surface of the stomach reddened; the vessels at the lesser curvature enlarged and distended with dark-brown coloured blood. On the posterior surface a roundish black spot, five inches in length and two in breadth.

2. On opening the stomach a strong smell of phosphorus; the mucous membrane of the stomach in its entire extent was of a brownish black colour, and covered with a thick mucus; at the cardiac orifice, the fundus, and the lesser curvature, it was studded with numerous streaky dark red spots. The mucous membrane was remarkably soft and macerated. The muscular coat of the stomach was reddened.

3. The mucous membrane of the upper third of the small intestine was in the same state as that of the stomach, but was covered with a thick and light brown mucous mass. There was no phosphoric smell in this situation.

4. The liver was of a remarkably whitish yellow colour externally, and on section it was exsanguine. The gall-bladder was distended with a large quantity of very dark green bile. The bladder contained urine of a dark-brownish red colour.

Jacob Schobesberger.

External Condition of the Body.

The hair easily detached. The cavity of the mouth pale. The face and chest jaundiced.

Internal Condition of the Body.

a. *Cavity of the Abdomen.*

1. The same appearances, with the exception of the black spot.

2. On opening the cavity of the stomach a very faint smell of phosphorus. The mucous membrane was slightly reddened, and was in several situations studded with dark brown spots. It was macerated, and so soft that with the nail it could be easily scraped off from the muscular coat. It was nowhere corroded.

3. The same appearances.

The peritoneum and the mesentery, as well as the abdominal muscles, were everywhere studded with numerous sanguineous extravasations.

4. The liver presented a white colour, and was exsanguine. The gall-bladder and urinary bladder were circumstanced as in the other case.

b. Cavity of the Thorax.

The lungs presented a black appearance, and contained much blood. The heart was soft, pale, and void of blood. In each side of the thorax were contained five ounces of a red sanguineous fluid.

b. Cavity of the Thorax.

The lobes of the lungs were of a very dark red colour, full of blood, and soft. The pleura and thoracic muscles were studded with numerous dark red spots of sanguineous extravasation. In each thoracic cavity were four ounces of blood red fluid.

c. Cavity of the Cranium.

Membranes of the brain and cerebral substance exsanguine.

c. Cavity of the Cranium.

Membranes distended with blood. Between the dura mater and arachnoid a thin layer of fluid blood was effused.

OBSERVATION.

The longer the divided muscles and viscera were exposed to the action of the atmospheric air, the more their redness increased to a brick red colour.

OBSERVATION.

The same remark is applicable as in the other case, and in instances of arsenical poisoning.

—*Wochenblatt der Zeitschrift der kaiserl. königl. Gesellschaft der Aerzte zu Wien*, 14th May, 1855. Page 313.

A Critical Review of Dr. Landolfi's Method of Treating Cancer. By
DR. CH. LASÈGUE.

A CERTAIN number of patients labouring under cancerous affections have just been confided to Dr. Landolfi's care. These patients, taken from the wards of the Hospice de la Salpêtrière, have been selected by the physicians and surgeons of the infirmary of that establishment, MM. Moissenet, Cazalis, and Manec, assisted by a Commission composed of MM. Mounier, Broca, and Furnari. The experiments are at present in progress. It will be easily understood that we are not about to interfere and prejudge results submitted to the investigation of competent judges; but Dr. Landolfi's method is already of many years' standing, it is not on its first trial, and it will be useful, even for the appreciation of the facts which shall be brought forward by the Commission, to make known the results already obtained.

Specific medications directed against affections hitherto reputed incurable excite a mistrust which is to some extent legitimate; most frequently the inventors are either physicians who have lost caste, or men who are completely strangers to science, and who are the more eager to extol their discoveries in proportion as their idea of the end to be fulfilled is less exact. Learned societies are accustomed to consign to contempt the crowd of receipts which is daily

laid before them; and the medical public, wearied with so many panaceas transmitted by inheritance, piously recorded or evoked by a sort of providential inspiration, does not feel better disposed towards them than the Academies.

Dr. Landolfi does not belong to the class of habitual blazoners of secret remedies; his method is not enveloped in any mystery; to borrow one of his favourite expressions,—he is anxious to propagate his processes for the sake of humanity, and his first desire is to submit them to the control of science. Surgeon-in-chief of the Sicilian Army, Clinical Professor of Cancerous Diseases in the Hospital of the Trinity at Naples, he has made it a point of duty to court a publicity which enemies as well as friends have admitted to be perfectly honourable. Instead of requiring patients to go to him, so as to constitute himself, in the secrecy of his private clinique, the sole judge of his success or failure, he has courted the investigation of men of science whose independence and competence cannot be gainsaid. It is in this spirit that he has gone through the great scientific centres of Germany, and that he has visited Paris.

We have not the honour of Dr. Landolfi's acquaintance, but we know his researches, and are anxious to bring before our readers the problem submitted by him, and the attempts made to resolve it, without ourselves pronouncing on the merit of the solution.

The medication most recently employed by Dr. Landolfi, and which he seems to have definitively adopted, is not the same as that he had at first been led to try, and had laid before the Scientific Congress at Naples. Neither is the plan of treatment now so absolute as not to admit of some modifications, according to circumstances.

The principle on which the treatment is based consists in transforming a tumour of a malignant nature by conferring on it a character of benignity which admits of cure. This transformation is effected by cauterizations with an agent looked upon as specific,—the chloride of bromine,—combined or not with other substances which have already been very frequently tried, but have hitherto been employed separately. The internal treatment is merely auxiliary.

The formulas for the caustic are, except in a few cases, the following:—Equal parts of the chlorides of bromine, zinc, gold, and antimony, mixed with a sufficient quantity of flour to form a viscid paste.

The foregoing is the formula the author chiefly used in Italy; at Vienna he seems to have preferred a mixture of the same substances in other proportions:—

Chloride of bromine, 3 parts; chloride of zinc, 2 parts; chlorides of antimony and gold, of each 1 part; made into a thick paste with powdered liquorice root. This preparation should be made in an open place, on account of the fumes which are disengaged.

The essential element is the chloride of bromine, which, especially in the later experiments, has often been employed alone without the addition of adjuvants:—Chloride of bromine, from $2\frac{1}{2}$ to 4 drachms; powdered liquorice, as much as sufficient.

According to Dr. Landolfi's views, the chloride of zinc is indispensable in ulcerated cancers, in which it acts as a hemostatic. The chloride of gold is only rarely useful; it is particularly indicated in cases of encephaloid cancer, in which it exercises a special, if not a specific action. Cancers of the skin, epitheliomas, lupus, and small cystosarcomas, are treated with chloride of bromine mixed with basilicon in the proportion of one part to eight.

At first the author contented himself with spreading the paste on a cloth large enough to cover the diseased part, recommending that the thickness of the plaster should be proportioned to the depth to which it was intended its action should reach; he calculated that an epithem of a line in thickness should act to the depth of about half an inch. Subsequently he has had recourse to a more complicated method, and has adopted additional precautions, which we shall describe at length.

The healthy parts surrounding the heterologous tumour are covered with strips of cloth, from an inch and a half to two inches wide, smeared with a pomade composed of four parts of chloroform and thirty of lard, or what is better, of cold cream; the specific paste is afterwards spread to the required thickness on compresses, and gently applied to the part affected. At this period of the operation the precautions mentioned above, in reference to the pharmaceutical manipulation, must be observed, and the patient must be kept near an open window, to avoid the injurious effects of the vapours of chlorine. The paste is not to be spread on a single compress of the size of the lesion, but on small portions of linen placed side by side, or even imbricated, so as to insure closer contact with the subjacent parts. The application of the paste ought not to extend to the healthy parts, its action being often propagated through a space of one or two lines.

When the dressing has been so far completed, it is to be covered with a pledget of lint, and a layer of compresses retained in situ with strips of diachylon.

To a tolerably sharp sensation of heat, pains, often very intense, soon succeed, and last for from four to six hours, and even longer. A tablespoonful of the following mixture may be given every hour during the continuance of the pains:—Hoffman's anodyne liquor, laudanum, of each, 1 drachm; syrup of orange-peel, 2 ounces; distilled water, 3 ounces.

The paste, which was formerly kept on for from ten to fifteen days, is now most frequently not allowed to remain on beyond twenty-four hours. On removing the dressing, a line of demarcation is almost always found separating the healthy from the morbidly altered parts; the tumour itself is in part whitish, in part reddish, or marbled with yellow and blue. The caustic is replaced with poultices of crumb of bread or lettuce leaves, or with compresses smeared with basilicon ointment, which are renewed every third hour until the scar is detached. The pain progressively diminishes, if it has not completely disappeared, in proportion as the mortifi-

cation advances. The line of demarcation becomes daily more evident: about the fourth or fifth day the cauterized portion begins to rise, and from the eighth to the fifteenth day it becomes detached, or can be removed without pain by means of a forceps, leaving exposed a suppurating surface secreting pus of good quality, and covered with healthy granulations. If any points remain of less satisfactory appearance, or still presenting traces of the former alteration, a little of the caustic paste is to be again applied. The wound is otherwise dressed according to the rules observed in the treatment of simple ulcers, whether with linen spread with cerate, or with balsamic ointments, or, if the suppuration proceeds too slowly, with lint dipped in the following solution:—Chloride of bromine, from 20 to 30 drops; Goulard's extract, from one to two drachms; distilled water, 16 ounces.

In the majority of cases healing takes place rapidly; cicatrization progresses from the circumference to the centre; no complications supervene, and the cicatrix resembles that left by a cutting instrument. The general state is very satisfactory, without Dr. Landolfi having made any change in the usual regimen of the patients: those cancerous individuals for whom a perfect cure is not expected experience remarkable relief. Notwithstanding the occasionally great degree of local pain, febrile reaction is not demonstrable.

All the observers who have watched the experiments agree in their statements of the facts we have just described, from whatever point of view they may have regarded them, and they come before us with the guarantee of the most respectable authorities.

As to internal treatment, we have said that the Neapolitan Professor considers it as an auxiliary to which it is not always necessary to have recourse. He admits that the modification produced by the chloride of bromine, employed externally, is not merely local, but that absorption of the specific by the skin, or by the wound, also takes place. It is as complementary to the treatment, and to prevent relapses, that he prescribes especially the internal preparation of the remedy, of which the following are the formulæ:—Chloride of bromine, 2 drops; powder of the seeds of water fennel, 23 grains; extract of hemlock, 12 grains: mix and divide into twenty pills, one to be taken daily for two months, and after that time two pills daily.

Chloride of bromine, $1\frac{1}{2}$ drop; powder of the seeds of water fennel, 15 grains; extract of hemlock or aconite, 8 grains: mix and divide into ten pills, one to be taken morning and evening for six months.

Lastly, in cancerous affections of the uterus, when the cancers of the parts most easily accessible are too extensive to be cauterized, when the cancerous cachexy has reached the highest pitch, the following solution is employed as a local modifier:—Chloride of bromine, from 10 to 20 drops; distilled water, 16 ounces.

We have thus described most minutely the operative manipula-

tion practised by Dr. Landolfi, and the pharmaceutic preparations to which he has recourse, thus opening the way to a testing of his system. It would be of little use to have described these processes without at the same time endeavouring, with the assistance of published observations, briefly to estimate their value.

Our object, as we have already stated, is not here to enter on a discussion, the data for which would be wanting; this is a task we leave to the Commission, whose ability and honour none will doubt. But mistrust is so legitimate when its object is a specific medication, the least semblance of assent is so dangerous, that it is our duty, before trying any of these methods, to make sure at least of the ground on which we stand.

The first question to be considered is that of the safety of the medication. The testimonies on this point agree so completely, that they command conviction; none of the observers, whatever may have been the amount of favour or disfavour with which they regarded the system, who have closely watched the trials made of it in Italy or Germany, have noted any serious bad consequence as resulting from it. The local inflammation attending the elimination of the disease does not exceed the limits assigned it by the operator; the general reaction is none, or is insignificant; all agree in stating that the patients were relieved; that they experienced no loss of appetite, of strength, or of sleep; that, on the contrary, they from the first acquired a certain alacrity. This first datum, which appears to us to be established beyond dispute, is sufficient to save the consciences of the experimenters; it perfectly legitimizes the steps taken by the administrators of the several hospitals, who have furnished the Professor with opportunities of propagating his mode of treatment.

The second question is more delicate. Were the tumours treated by Dr. Landolfi really of a cancerous nature? Were there not, to explain a supposed success, errors of diagnosis such as are too frequently made in putting forward a curative method. Never was there a period at which people were less disposed quietly to accept cancers diagnosed in haste, and to support a cure. If definitive opinions are not always uniform, all agree as to the necessity for close examination, and of not trusting to appearances. It seems to us more than probable that among the patients submitted to treatment, tumours and ulcerations of all kinds must have been confounded under too general a denomination; the descriptions are, by no means, all so explicit as to prevent us retaining some doubt as to the majority of the cases to which the most remarkable success is attributed. Dr. Landolfi has, like all inventors, found, along with sceptics, partisans prone to enthusiasm, and consequently inclined to magnify the merits of the discovery by exaggerating the severity of the disease; but, whatever be the narrow limits of our confidence, we willingly concur in the judicious observations of Dr. Calderini. If carefully instituted experiments do not show that

we have as yet obtained a specific for cancer, those which have been made justify us in believing that the plan recommended by Dr. Landolfi fulfils valuable indications; that it cures, without inflicting danger on the patients, tumours and ulcerations, the treatment of which was hitherto dangerous or difficult; that it furnishes the surgeon with a modifier of great power, as well as of perfect safety; that it improves sores for which we were hitherto deficient, even in palliatives; finally, that its author deserves to be distinguished from the crowd of inventors, of whose discoveries nothing useful survives the day in which their panacea was proved to be neither specific nor infallible.

We have, in all frankness, expressed the opinion we felt ourselves bound to hold until we should receive more ample demonstration; but in such matters, an opinion is not worth one fact. Statistics would perhaps be still less decisive, and we have, therefore, thought it well, notwithstanding the length of this statement, to bring forward some cases. Those published have been reported by medical men who appear to be favourable to the system, but who rest on scientific testimony; they have been too recently observed to enable us to draw any legitimate conclusion as to the possibility of a relapse; accordingly, we have abstained from speaking of the absolute curative value of the treatment, convinced that it would be premature to sustain any conclusion of this kind, and to anticipate the future. M. Landolfi's plan of treatment can only be judged by its actual results.

Dr. De Brunn witnessed cures effected in the city of Gotha, whither Dr. Landolfi was summoned on the 13th November, 1853, to attend a princess of the reigning family, and where he treated, in the space of two months, about 100 cancerous patients. Among the cases he reports, two especially deserve attention.

The first was that of a woman aged 59, affected with a tumour of the breast, examined by Meckel of Berlin, and thus described by that microscopist:—The proper mass of the tumour consists of a reticulated structure, moderately supplied with bloodvessels in its fibrous tissue, in the midst of which, meshes or alveoli are plainly observed filled with characteristic cancer cells.

The tumour, discovered about a year before, and at first lost in a general swelling of the breast, had become more and more isolated; it was hard to the touch, angular, had resisted the several means indicated, and had finally ulcerated, forming an ichorous excoriation, with thick and elevated edges. The paste was applied on the 14th of November. On the 25th the eschar was removed with the forceps without pain or hemorrhage; the sore, not being considered to be in a satisfactory state, was submitted to fresh applications of the caustic, which were continued until the 4th of December. On the 23rd of January, the sore, which had first been converted into a huge cavity, had cicatrized, with the exception of excoriations of the size of a bean.

The second case we shall quote is that of a woman from Berlin, aged 60, who had for twenty years laboured under a hard tumour situated at the outer side of the left breast. This tumour, which was during the last seven years in a state of ulceration, was very painful, had a bad smell, and gave rise to frequent hemorrhages; there was an almost constantly febrile condition, debility, and depression. At the time the treatment commenced (23rd November), the ulcer extended to the edge of the axilla; it was five inches in length and three in height. The edges were callous and strongly adherent; towards the posterior boundary was a group of knotty tumours discharging sanies.

M. Landolfi diagnosed a fungus hematodes; microscopic examination by Meckel proved it to be a medullary fungus. On the 3rd of December the bottom of the sore was clean and covered with recent granulations; the edges remained hard and knotty. The application of the chloride was repeated. On the 15th the granulations were well developed, the edges were inclined to close; a smooth and clean cicatrix was established. The patient's general state was improved, the improvement progressed rapidly, and on the 15th January the cure was complete, after the disease had lasted for twenty years.

At Vienna Dr. Landolfi likewise treated, from the beginning of June to the end of July, a great number of cancerous patients. The anonymous author who brought the results before the Society of Medicine quotes at greater or less length 33 cases which he observed himself, and which are thus analyzed:—Pseudoplasm of the breasts, 17 females; of the nose, 4; cancer of the lips, 2; of other parts of the face, 5; cancerous infiltration of the axillary glands, of the ribs, and of the scapula, 2; extensive carcinoma of the inguinal glands, 1; encysted cancer, 1.

We shall, without selection, adduce some of the cases according to the chronological order in which they came under treatment.

1. A woman, aged 40, of good general health, had for two years an indurated kernel in the left breast, which was painful, and was increasing in size with tolerable rapidity. Other tumours became developed; the axillary glands were swollen. The number of the new tumours, which varied in size from that of a pea to that of a nut, was at least a score; the skin was not altered. Dr. Wattmann being consulted, declined to operate, and diagnosed a racemose medullary fungus. At the time she was under treatment three tumours, of the size of a hen's egg, ulcerated, from which a putrid, ill-looking sanies oozed, were particularly observed; the neighbouring lesions had equally progressed. Her state was anemic, her complexion straw-coloured. Dr. Landolfi undertook her treatment with a view to palliate, and without expecting to do more than relieve the patient.

On the 9th of June the paste was partially applied. About eleven in the forenoon pain set in, and continued acutely until five in the evening; from that time until four the next morning it was

very supportable; there was slight loss of blood, which stopped spontaneously.

Next day the patient, notwithstanding the persistence of the pain, was able to rise; the pulse was natural, the appetite good. She had courage enough to request that the caustic might be again applied, which was done.

On the 19th, in removing the dressing, a portion of the size of an apple came away without pain or hemorrhage; submitted to examination by Professor Rokitansky, it was ascertained to be formed by an encephaloid cancer.

The paste was again applied four or five times, and each time brought away a fresh portion of mortified substance; the sore was dressed with basilicon ointment. The patient felt much improved, but she was not cured, nor did a cure appear to be probable.

2. A man between thirty-eight and forty years of age, presenting indurated painful tumours in the right axilla, extending anteriorly to the fifth rib, to which they adhered; there was a similar induration at the olecranon, with considerable tumefaction of the entire arm, and even of the hand, as well as of the shoulder. Two years previously some of these tumours had been extirpated by a surgeon. The operation was attended with temporary relief, but the disease soon advanced with fresh violence. The patient's general aspect was bad; his complexion was pale and cadaverous. On percussion there was dulness on the right side; posteriorly and superiorly, mucous râles were audible. Notwithstanding these very unfavourable circumstances, the patient was submitted to treatment.

On the 9th of June several tumours were attacked with the paste; there was a slight hemorrhage which ceased spontaneously. Dr. Landolfi gave no hope.

After some days the mortified parts became detached; they consisted of encephaloid cancer. The sores were healing slowly, but were healing; the tumefaction of the arm continued; the kernels adherent to the bones were not subjected to treatment. The patient was still under treatment; cure remained at least doubtful.

3. A woman, aged 72: hemiplegia of the right side, heterologous suppurating tumour of the right breast, four inches wide and about two in depth. Canterization was tried only in parts, on account of the age and infirm state of the patient. The first application was made on the 11th of June, and on the 19th a mortified portion, of the size of an apple, separated, leaving a sore secreting pus of good quality. The tumour, on examination by Professors Rokitansky and Wedl, proved to be a *cystosarcoma phyllodes*.

The application of the caustic was repeated on the 20th and 21st of June, and 1st of July, and was each time attended with a like result. At the end of July the patient was freed from a disease under which she had laboured for two and thirty years; her general state was satisfactory. She did not, during the entire course of the treatment, experience the slightest febrile reaction.

4. A woman, aged 64, affected with a cancerous tumour of the right breast, of four years' standing, which had gradually reached the size of the fist, and was since the month of November in an ulcerated state. The caustic was applied on the 12th of June: on the 21st the entire mass fell out; it was formed, according to Rokitansky and Wedl, of a fibrous cancer. The sore was completely closed on the 20th of July.

5. A woman of forty years of age, suffering for twelve years from lupus of the right cheek, extending to the lobe of the ear. Two cauterizations had already been unsuccessfully made. Dr. Landolfi applied a paste composed of 1 drachm of chloride of bromine and an ounce of basilicon ointment. At the end of twelve days the mortified part separated, leaving a sore which was dressed for three weeks, first with baume de Sainte-Geneviève, and afterwards with the following solution:—Chloride of bromine, 20 drops; distilled water, 16 ounces; saturated solution of acetate of lead, 1 drachm. At the end of that time cicatrization was complete.

6. A woman, aged 50, of tubercular diathesis, amaurotic for eighteen years, had laboured for two years under lupus, occupying the two *alæ nasi*, and extending on one side to the outer angle of the eye; it was extremely painful, and had already been unsuccessfully cauterized by a surgeon of the city. The treatment was the same as in the last case, and it was attended with a similar beneficial result.

7. A woman, aged 40, affected, according to her statement, for twenty years with an indurated kernel in the left breast, which became rapidly enlarged, causing acute pain. The tumour was excised by Professor Dumreicher on the 13th April. The wound was not entirely healed, when a new cancerous button, still larger and more painful, made its appearance; it soon attained the size of an apple. Some of the sub-axillary glands were infiltrated; movement of the left hand was difficult. On the 14th of June the paste was applied, without chloride of gold. On the 23rd the part which had been reached by the caustic fell off, and was recognised by Professor Rokitansky as encephaloid. Some suspected parts were cauterized anew; the glands diminished and disappeared, and at the end of July the sore had healed; the hand had recovered its mobility; the general health was good. Unfortunately, this patient was not seen later than about twelve days after recovery; at that time there was no appearance of relapse.

8. A man of thirty years of age, from whom the right testicle had been removed a year and a half previously, on account of its cancerous condition. There was a fungous tumour of the left testicle, extending into the right inguinal region, and forming a cake as large as a plate; there was no pain. The treatment was tried unsuccessfully; no portion became detached.

9. A woman, aged 43, presenting a knobby, hard tumour of the right breast, which had lasted twenty-four years: there were four

very painful masses, of the size of a goose-egg, situated around the nipple. The paste, without chloride of gold, was applied on the 20th of June. On the 28th one of the tumours separated, and was characterized by Professor Rokitansky as cystosarcoma; the other tumours were successively removed by the same method, preserving the nipple which remained sound; the sore, reduced to the size of a one-franc piece, was on the point of healing; the patient felt very well; the pains had ceased.

These examples, which it would be useless to multiply, will suffice to give an idea of the treatment, to demonstrate its harmlessness in all cases, and its efficacy under certain circumstances. The other cases reported in the German or Italian journals would add no new element, and would only confirm what the foregoing observations give us to know or to anticipate.

One word in conclusion. It has been attributed to Dr. Landolfi that he professes to cure all cancers by his process: we do not know whether he now possesses such confidence in it, but we can say that in his former communications there was nothing to authorize us to suppose that he entertained a presumption unhappily so unsustainable.—*Archives Générales de Médecine*, May, 1855, p. 609.

On Palatal Suture by means of Two Fixed, Immovable Needles. By DR. FRIEDINGER, Provisional House Surgeon in the Imperial and Royal Foundling Hospital.

THE facility obtained in performing the operation of suture of the palate by employing two needles, made according to my design, was positively acknowledged by Professor Schuh, after practical experience of their advantages, in No. 22 of this Journal*. As this acknowledgment is to me the fullest proof of their utility, I take the opportunity of describing the origin of these needles.

Their origin was, in fact, the wants and difficulties usually met with by the operator in employing Roux' needles; for it was my experience of these difficulties, on one occasion, which led me, in a case in which the operation had to be repeated, to reflect on the possibility of dispensing with the latter instruments; for in employing them it happened to me that they were often presented under an angle which shortly before the piercing proved unsuitable, and, therefore, had to be altered; that the angle shifted, sometimes immediately before the piercing, in consequence of the needle-bearer closing too

* The following is the description referred to:—"Dr. Friedinger had a pair of instruments made, in which needle and needle-bearer were immovably joined, one of the instruments being but slightly curved at the extremity of the needle, to admit of its perforating the parts from before backwards, while the other is more fully curved to enable it to perforate them from behind forwards. The eye is situated at the pointed extremity of the needle, and the instruments are similar to these employed by Wutzer in vesico-vaginal fistula."—*Wochenblatt*, No. 22, May 28, 1855, p. 345.

loosely; but if the latter closed too firmly, the eye of the needle was apt to break, especially if the needle was not properly placed in the needle-bearer, or if the needle itself happened to be brittle. If this fracture of the eye occurred before the needle was introduced into the mouth, it was of little consequence, but if it took place in the fauces before its direct employment, or during its employment, it was not very easy to get it out. It was only with difficulty that I twice succeeded in removing the broken piece of needle which had fallen down on the base of the tongue. If the needle broke in two while it was stuck in the soft palate, the piece of needle, being short in comparison with the soft parts, could only with difficulty be seized with the forceps and withdrawn. The operation, under these unfavourable circumstances, was finished with much difficulty. Union took place in the uvula alone. The patient determined to have the operation repeated. But this time, as I have stated, I was anxious to dispense with Roux' needles. I, therefore, got two needles made, one almost straight, and the other curved. Both were designed by me without my having been aware of the employment of similar needles in the operation of suture of the palate. When I was getting them made, an aneurism needle, resembling the former, was shown me in a drawing, but it was for quite a different purpose.

The straight needle, but slightly curved at the extremity containing the eye, was intended to guide in the closed end of the double ligature on the one side of the palatal cleft, and the open end on the other from before backwards. For this purpose a curve as great as necessary was given to the perforated end of the needle, in order that the latter and the ligature might be more easily seen behind the soft parts. During the application of this needle, the handle, continuous in a straight line with the blade, was held somewhat obliquely and towards the outside of the hand of the operator. By this means all interference with the incident light was avoided. If the ligature was visible on the posterior part of the left palate, the designedly short and closed end of the thread (the loop) was drawn out of the needle by means of a long forceps, and the needle was drawn back empty. The same was done on the other side with the open end of the thread. Accordingly, the looped end and the open end of the thread lay each on one side behind the soft palate. In order now to tie the knot at the side of the united edges of the wound, both ends of the thread had to be brought forward and drawn to a corresponding length. With this view I laid the open end of the thread by means of the forceps in the loop, or drew both ends of the thread forward through the cleft. Hereupon I brought the ligature of the loop bearing the open end of the thread forwards; by this means the loop itself, with the ligature laid in it and both ends of the thread, came to lie to the front. The loop which had lain behind the palate and to the right of the operator, now lay forwards and to the left; the open end of the thread, which had lain posteriorly and to the left, now lay anteriorly to the soft

palate and to the right of the operator. In this situation both ends of the thread were drawn forward, and the knot tied. By means of a second knot tied in the same manner, the hole in the soft palate was closed.

On another occasion, and in these cases in which the soft palate was completely cleft, and was easily replaced by means of the forceps, this slightly curved needle was also passed in from behind forwards, by which the minute inversion of the ends of the thread is avoided. But in my first case of operation this proceeding would not have been practicable without first again separating the part already united.

On the presumption of the possibility that the hole of the former palatal cleft might permit the application from behind of a correspondingly large and equally curved needle, I had a second strongly curved needle, having likewise an eye in its extremity, prepared. This was first tried by Professor Schuh, and since that time it has been recommended by him as facilitating the palatal suture. I was not at the time aware that Wutzer, Naegelé, &c., have recommended a similar needle for the operation for vesico-vaginal fistula. The palatal needle designed by me is, in conformity with its object, larger at the perforated extremity, and, in order that the operator's hand may not itself be in his way, its handle is correspondingly curved. Equally unknown to me was Donige's handle-bearing needle, quite similar to mine, which has been long known in the operation of palatal suture, but has not been in use in the Vienna School. I, therefore, only claim to have called attention to its advantageous applicability through the experience of my esteemed teacher, Professor Schuh. The design of the needle straight in its greater part, and only a little curved at the end, belongs, however, so far as I know, to me alone.

Notwithstanding the easy mode of operating adopted, the closing of the soft palate did not succeed in the second operation either. The partial union, which at first existed, gradually completely gave way, without my being able to assign a cause for it. It is possible that the loop slipping may have been the cause; but probably the joining was too loose. Every possible tension was counteracted by parallel incisions. The patient promised to allow another attempt to be made at some future period. Even though the operation was not crowned with due success, yet every difficulty was for the future removed, indeed I might say the danger of the operation was taken away, for a broken needle falling down into the pharynx might be attended with very serious consequences.

The simultaneous employment of both needles in palatal suture, and the ease in the manipulation, I lately saw for the first time in Professor Schuh's clinique. By means of the slightly curved needle the double ligature was first introduced on the left side from before backwards, the ligature loosened, and the needle brought away empty. Hereupon the short loosened end of the thread was drawn forward,

and threaded into the strongly curved needle, brought from behind forwards to the right side of the operator; the short ligature was again untied, the empty needle drawn back and withdrawn through the mouth. The entire manipulation was carried on by means of the left hand. In this manner both needles were employed at the same time, and both ends of the thread were, as originally, brought to lie anteriorly.

The straight needle slightly curved at its extremity was thus originally destined by me for those cases in which the space is limited, and the application of the completely curved needle is not very easy. The necessity for a second fixed completely curved needle, not liable to break, was not, however, felt by me alone, but also, it would appear, previously by Doniges.—*Wochenblatt der Zeitschrift der k. k. Gesellschaft der Aerzte zu Wien*, June 11, 1855, p. 377.

Case of Fibro-cellular Epiperitoneal Tumour successfully operated on; with Observations on Tumours of this Nature in general. By
PROFESSOR CARL SANTESSON.

Mrs. X., of Stockholm, aged 34, consulted me in the beginning of October, 1854, for a "lump in the left side of her stomach," which she said she had perceived about two months previously, and had of late weeks observed to increase rapidly. The tumour had not caused her any peculiar pain or other inconvenience; it was only occasionally that she experienced twitches and cuttings in it; she had also, sometimes, found it tender on pressure on its inner edge.

On examination, I found the tumour occupying the upper and anterior part of the left hypochondrium, with evident signs of being situated externally to the peritoneal sac, consequently in the abdominal parietes, but so deeply seated that, in all probability, it lay upon the peritoneum and beneath all the abdominal muscles. Thus the latter were, to a certain extent, movable over the tumour, but if the abdominal parietes were relaxed, so that they could be taken up in a fold, the tumour was felt to follow, although only with its inferior margin, for its upper end passed under the margin of the ribs, within which it appeared to be continued upwards to some distance. It was here more strongly attached to the surrounding parts, and was inaccessible to examination by the touch. If the diagnosis of the situation of the tumour was correct, its superior portion should extend upwards to the line of union, where the upper attachments of the rectus and transversalis muscles on the inside of the cartilages of the ribs meet the anterior attachments of the diaphragm.

The tumour was of an oval shape; it felt firm, almost hard, with an even and smooth, somewhat convex surface, which at the boundary between the middle and lower third, exhibited a transverse, not very deep depression, by which the tumour was divided into two parts, one superior and larger, the other inferior and smaller.

Its length, from the edge of the ribs downwards, was rather more than five and a half inches; its breadth, from the outer edge of the rectus muscle, which the tumour somewhat overlapped internally, was scarcely five inches. When the outer and lower part of the tumour was raised with the abdominal parietes, it was plainly felt that the surface looking inwards was strongly convex, almost more so than that looking outwards; but there were no symptoms indicative of pressure on the parts lying in the abdominal cavity. Two medium Stockholm so-called "French loaves," with their under surfaces placed together, would give a tolerably correct representation both of the shape and size of the tumour.

As to the patient's antecedents, I obtained the following information. There was no hereditary morbid tendency. Of large and strong frame of body, she had invariably enjoyed uniform and good health. She had menstruated regularly from the time she had completed her fourteenth year. She married at twenty-nine, and had three children, all of whom she nursed herself. The last child, a boy, was born on the 7th of August, 1854, and when she first visited me (about seven weeks after her confinement), she had in both breasts a rich and abundant supply of milk, which seemed to agree well with the child in every respect. Nothing morbid could be discovered on physical investigation, in the organs of either the thorax or abdomen.

The last pregnancy had, however, been attended with a complication which ought to be mentioned, and which did not exist during either of the preceding pregnancies. In the second month (in December, 1853) she got at night, during sleep, an attack which, from the description, appears to have presented all the characters of epilepsy. This returned under the same form, and at the same period of the night, twice in the commencement of the year 1854; thus all these attacks occurred in the first half of pregnancy, but there was no return of them after the period of quickening. After her confinement, however, she had a similar attack, in the night between the 26th and 27th September, from which time she continued free from them until the 20th of the following November, when a severe fit of the same kind again occurred.

This was the last before the operation, the only means through which it could reasonably be hoped that the patient might be freed for the future from the tumour and its consequences. The latter were not likely to be very long delayed, for the tumour meanwhile increased in volume with such uncommon rapidity, that in about one month it had extended by inches in all directions.

As to the operation, the situation of the tumour, with the difficulty of determining its relation to the peritoneum, its very rapid growth of late, and its consequently uncertain nature, gave rise to various doubts. The result of the disease, if left to itself, with respect to the patient's health and life, was, however, not doubtful; it was, in fact, only a question of time. Should it, during the opera-

tion, be found impossible at any part, of greater or less extent, to separate the tumour from the peritoneum, it would still be open to the surgeon to tie it as near as possible to the membrane in question, and to leave it to the suppurative process to remove the remnant. But here the uncertainty as to the nature of the tumour again presented a new difficulty, for should it prove to be cancerous, any operative interference, and especially such as has just been mentioned, could only hasten the fatal issue. In favour of its cancerous nature there was, properly speaking, only its rapid increase; against it, on the other hand, was the fact, that although it may, indeed, be generally stated there is no part of the body which is not liable to cancer, still, so far as I could collect from my own and the published experience of others, it does not occur primarily in the situation and under the circumstances here described. The case resembled in many respects another which had some years before occurred in my private practice, namely, that of an epiperitoneal tumour in the left hypogastrium. This tumour was successfully operated on in the autumn of 1852, and I have given a more detailed account of the case in the Transactions of the Swedish Society of Physicians*. The particularly satisfactory result of this operation led me to hope for like success in the present instance, and I determined to undertake the extirpation of the tumour.

But it was necessary first to wean the child, to get rid of the milk, and to allow the system some time to recover its equilibrium after these changes. This was done, the tumour meanwhile continually enlarging, and every week visibly extending its limits.

On the 22nd of last December the extirpation was undertaken, the patient having first been placed under the influence of chloroform. The inhalations had to be continued for about twenty-five minutes before the operation could be commenced, and although consciousness of what was going on appeared to have been removed, she was not perfectly tranquil when the incision in the skin was made, and I was, therefore, obliged to desist for a time until more complete anæsthesia was produced. An incision of about eight inches long was made over the middle of the greatest length of the tumour, passing downwards from the costal cartilages about an inch externally to the outer edge of the rectus muscle, and parallel to it, to below the level of the umbilicus, and was carried through a less extent into the mass, with a view of more accurately ascertaining its exact limits, and so preventing anything superfluous being needlessly taken away, as belonging to the tumour and forming its envelope. This incision into the mass of the tumour produced a considerable parenchymatous bleeding, which, however, soon almost entirely ceased under the employment of pressure, and the application of sponges wrung out of cold water and repeatedly changed.

In liberating the tumour on its anterior surface I met no parti-

* See the Hygiea for 1853, vol. xv. p. 174.

cular difficulty, with the exception of the part where it passed under the edge of the rectus muscle, where the adhesion to the fibrous sheath of the muscle was particularly firm. After the anterior surface and edges of the tumour were freely dissected, I endeavoured to pass under and behind its lower margin, as the freest and most accessible, in order to be able, as the dissection proceeded, to lift up the tumour, and with more security to follow with the scalpel its posterior and interior surfaces. In this I succeeded, except in a space of the extent of about four inches square, corresponding to the middle of the side of the tumour which was turned inwards, where the union between it and the fibrous investment of the peritoneum (belonging to the fascia transversalis, which, as is well known, becomes slighter the higher up on the anterior abdominal wall it is examined), was so firm, that, considering the thinness of the layer separating the tumour from the cavity of the abdomen, I did not venture to continue the dissection boldly for fear of opening the latter. I, therefore, adopted another mode, analogous to that usually employed in the operation for strangulated hernia, namely, lifting up with the forceps a small fold of the membrane which passed over from the bottom of the incision to the surface of the tumour. This was carefully cut, after which the division was continued with the aid of a director introduced through the opening which had been made. After this was done and the tumour was raised, the peritoneum was seen so exposed and thin, that the transverse colon lying within it was plainly apparent. The upper extremity of the tumour, looking towards the cartilages of the ribs and passing somewhat under them, was tolerably easily liberated, for it did not extend far up, and admitted of being drawn down by gentle traction, and was so rendered more accessible to the knife.

In this manner I succeeded in completely extirpating the tumour. The hemorrhage during the operation was considerable, both from the tumour itself and from its numerous and large nutrient vessels (branches of the epigastric and internal mammary arteries), as well as from the muscular substance of the rectus abdominalis, which I could not avoid cutting into in the dissection. However, the bleeding was, for the most part, parenchymatous, and after the wound had been well washed and freed from all coagula, there were only two vessels which required the application of a ligature. The wound was united by means of six twisted sutures, between which strips of adhesive plaster were laid; dry lint, and a firm binder applied round the abdomen completed the dressing, and the patient was removed from the operation table to bed.

In the afternoon the patient felt well, but very weak from the loss of blood and the after effects of the chloroform. Next day she was tranquil. On the 25th December a painful stitch set in in the region of the liver, which considerably impeded respiration. Percussion and auscultation indicated nothing morbid in the right lung, nor did the general symptoms and examination of the abdomen give

reason to infer the existence of ordinary peritonitis. This unpleasant symptom was removed by the application of a sinapism to the part affected, but it occasionally returned at shorter or longer intervals. It, however, always immediately yielded to similar local treatment, and the internal use of a teaspoonful of solution of morphia repeated as required twice or thrice a day. The wound turned out well; the greater part of the edges healed by the first intention, leaving only in the middle and at both angles the openings necessary for the discharge of the pus. The sutures were removed after the lapse of three days, and the ligatures loosened on the fifth day.

In the beginning of January a severe attack of flying rheumatism, both articular and muscular, attended with considerable fever, but without any gastric complication, set in. It affected chiefly the joints of both extremities, flying backwards and forwards from one to the other, sometimes it prevailed simultaneously in several. It was only in the joints of the knees and hands that any effusion occurred, and in them it was not in great quantity. At the same time, as well as subsequently, now one, and again another group of the muscles of the trunk, especially those of the neck, was attacked, occasionally rendering the patient, in the proper sense of the word, "as stiff as a stake," without the least power of motion. Copious perspirations, too, occurred almost every day, but never at any fixed time. Under the use of quina in solution by day, and of morphia by night, with the application twice or thrice daily to the affected joints of an ointment of powdered digitalis leaves, followed by swathing with flannel, this articular complication gradually gave way, and everything seemed to promise progressive amendment.

This, however, did not ensue. On a subsequent visit, on the 16th of January, I found the patient lying with her respiration considerably affected, and on examination I discovered a pleuritic effusion in the inferior portion of the left side, extending as high as a large hand's breadth, with troublesome cough, but without pneumonic sputa. I changed the quina for turpentine and continued to give morphia at night, without which, when it was attempted to leave it off, she always felt worse. Sinapisms were repeatedly applied to the affected side. The pulse, which on no day since the operation had been under 120, now rose still higher, and the strength began to give way. What made this attack of pleuritis still more distressing was the difficulty of examining the condition of the lungs, as every, even the least change in her position, which was that of constantly lying on her back, occasioned the patient much pain, which was still further increased by the commencing formation of a bed-sore in the sacral region. The discharge from the wound maintained, however, a good character, but became gradually diminished in quantity. After the turpentine had been continued for three days, it was alternated with quina in larger doses, the morphia being still given twice or three times a day. The further extension of the bed-sore was prevented by diligent washing with a solution of three grains of corrosive sublimate to the ounce of spirit, a remedy which

I can, from experience, recommend as particularly efficacious in removing the soreness of the soft parts and the accompanying general uneasiness which so often occur in patients who are obliged to keep the same position long; it strengthens the skin, and prevents bed-sores better than any other means I am acquainted with. The diet was as nourishing and high as circumstances would admit of. Under this treatment the pleuritic effusion, during the course of a week, steadily diminished; the cough ceased and the respiration became again perfectly free. After the pectoral complication had subsided, the patient's strength gradually increased, and I now gave wine of the seeds of colchicum for the attacks of rheumatism in the joints and muscles, which were still occasionally recurring, with the result that after five or six days they entirely disappeared, and convalescence uninterruptedly progressed. On the 4th of February the wound was perfectly healed, that is to say, in about six weeks after the operation.

It is remarkable that, notwithstanding the operation was carried so near the peritoneum, no peritonitis ensued, although both the operation and the subsequent complications appeared to be particularly favourable to its production. I attribute this fortunate result chiefly to the uninterrupted quiet, the liberal use of morphia, and the sparing employment of laxatives. Perhaps the obstinate stitch in the right side, which the patient first complained of, was a partial diaphragmatic peritonitis; at least it bore the greatest resemblance to what would be produced by that affection; but why it should, if it was closely connected with the operation, localize itself on the right side, and not rather occur on the left, where the incision extended most nearly to the diaphragm, I cannot say.

Nature of the Tumour.—After extirpation the tumour was found to measure over the convex surface 9 inches in length, and 7 in breadth. Cut lengthwise through the centre, it measured over the plain surface of section $7\frac{1}{2}$ inches in length by 5 in breadth. The weight, which was not tried until after the tumour had been opened, by which a great part of its fluid contents was evacuated, was as nearly as possible $2\frac{1}{2}$ pounds. The tumour, which was of an oval shape, had an even smooth surface, was covered with a thin, extremely delicate membrane, composed of connective tissue, and, as was noticed above, was indented along the boundary between the middle and inferior third, and was thus divided into two parts. When cut through, it gave exit to a large quantity of a light yellow fluid, slightly tinged with green, viscid as albumen or thin mucilage, which pervaded the entire parenchyma, and was also collected in cavities in the interior of the tumour, varying in size from that of a small hemp-seed to that of a Spanish hazel-nut. The largest of these cavities were invested with a very thin and delicate smooth membrane. To the naked eye the solid mass of the tumour seemed to consist of a fibrous tissue, composed of bundles of various thickness, which interlaced with one another, some of them in a twisted undulating form traversing the surface of section, while others in a

circular mode surrounded the cavities just mentioned (alveoli, lacunæ), formed by the loops or interspaces which the twisted fibres here and there left between them, thus presenting the type of an areolar structure.

In the place where the tumour, towards its lower extremity, was divided by an indentation passing round it, a septum from two to six lines broad was seen on section extending across the whole swelling, and was formed of a firmer and more highly developed fibrous tissue (of tendinous texture), than could be discovered elsewhere in the tumour. Its pearl white appearance contrasted strongly with the looser surrounding mass, which had a yellowish colour somewhat inclining to green. On the surface of section of this septum were seen numerous large and gaping mouths of vessels, several of which measured a line in diameter, and were evidently venous, forming together a complete plexus, which in this situation crossed the tumour.

On *microscopic* examination the above mentioned bundles or bands, forming the greater part of the mass of the tumour, appeared to be composed of fine, wavy filaments running parallel to one another, and of the same nature as we find in the ordinary connective and tendinous tissues. In many places the filaments appeared to be for a short extent broader, as if flattened out, and where this was the case there were seen in addition, more or less perfect nuclei of cells, enclosed in the filament, indicating its original formation from so-called fibre-cells. This was still more evident after the addition of concentrated acetic acid. Such fibre-cells were found in quantity imbedded between the microscopic filaments just mentioned, and the bundles compounded of these. The synovia-like fluid which pervaded the tumour, and was also found collected in the cavities already mentioned, exhibited under the microscope chiefly elementary granules and free nuclei, with in addition a few fibre-cells not fully developed.

The peculiar yellowish colour, somewhat inclining to green, which the tumour presented on section, gave it at first sight some resemblance to loose fat; but depended exclusively on the fluid or plasma, which was found in such great quantity enclosed in the mass of the tumour. The latter lost nearly one-third of its volume, and probably also of its weight, after the fluid in question had escaped or been pressed out; on pressure it sprang up as out of a sponge. The fluid coagulated both on the application of heat and on the addition of alcohol, and, not taking the salts into account, was composed principally of water and albumen. This circumstance caused the tumour, when preserved in spirit, to lose almost entirely its original and characteristic appearance; the albumen became coagulated, solid and white, and gave the entire more the aspect of an ordinary, simple, purely fibrous tumour, to which class it was also histologically allied. However, we are fully justified in distinguishing tumours of this kind, as in normal histology we distinguish be-

tween the purely fibrous and the so-called fibro-cellular tissue ("fibrous tissue" from "areolar tissue").

The rapid increase of volume of the tumour, fully equal to and almost exceeding that observed in the worst form of medullary cancer, is also easily explained by the presence of this great quantity of plasma infiltrating the whole tumour, and rendering it, so to speak, œdematous. For it is evident that this increase in the mass did not depend exclusively, or even for the most part, on a proper growth, or a corresponding increase of actual parenchyma, but chiefly on the swelling which the considerably and incessantly augmented quantity of plasma occasioned. It is useful to bear in mind the distinction between growth and swelling, to which Paget also calls attention, in investigating and forming an opinion as to tumours, not only of this but of many other kinds. The circumstance alluded to also explains the great degree of elasticity shown by the tumour, less, however, before extirpation, as its strong muscular and aponeurotic investments compressed it and made it feel harder and more solid to the touch, than after its removal and before it was cut through, when it felt almost like a rather thick sac, filled with fluid. On being cut through, the mass most nearly resembled highly œdematous areolar tissue, especially that found beneath the skin at the back of the bodies of persons who have died with anasarca.

The results of the investigation of the composition and nature of the tumour, therefore, shows that it belonged to the class of tumours termed by Paget "fibro-cellular in a limited sense," thus distinguishing them from the ordinary polypi (of connective tissue), and the outgrowths intimately connected with the skin and its sub-jacent tissue (panniculus adiposus). The latter occur most frequently on the scrotum, prepuce, labia pudendi, clitoris, &c., and belong properly to the class of hypertrophies, not of tumours.

The fibro-cellular tumours (in the stricter sense) are described by authors under many different names, which, through their multiplicity, rather puzzle than enlighten. Thus Vogel reckons them as tumours of connective tissue, which view can indeed be justified; but when he says that their structure is analogous to that of the cutis, his statement is so far incorrect, as no elastic fibres enter into their composition as is the case with the cutis. Joh. Müller and many others refer them to the group he has denominated cellulo-fibrous.

The species he calls "*collonema*" seems to be allied to the case I have brought forward, and is composed of the tumours in which the fibrous element is little or not at all developed; it therefore comprises those poorest in fibres, which are consequently the loosest, softest, and most succulent specimens of this class. Rokitsky, who, in revising the confused nomenclature of tumours, endeavours to retain and attach to a definite group the fluctuating and hitherto indefinite term sarcoma (namely, to the benign, more or less fibrous tumours remarkable for the large amount of albumen they contain, and distinguished from the gelatine yielding purely fibrous tu-

mours), denominates the form in question *albuminous fibrous tumour* or *fibrous sarcoma*;—see his “Handbuch der Pathologischen Anatomie,” Band I., page 337. This formation is distinguished only by a more abundant development of the fibrous element from the form Rokitansky puts forward as the first variety of sarcoma, namely the gelatinous or gelatiniform, to which he also refers Müller’s colonema. The French pathological anatomists refer the variety in question to the head of fibro-plastic tumours. Paget’s term appears to be the simplest and the best suited to the histological composition of the tumours.

The fibro-cellular tumours in a limited sense, distinguished from the so-called polypi and above named hypertrophies, are much rarer than the latter, and are even rare in comparison with other forms of tumours. This circumstance, which is also observed by Paget, is so much the more remarkable as the same elements of texture which enter into and constitute the fibro-cellular tumours occur in such great quantity and so generally diffused through the healthy organism under the form of the ordinary connective tissue. Both are morphologically completely homogeneous formations. The fact is difficult to explain, above all when it is considered how often and with what ease this tissue is formed whenever a loss of substance is to be replaced by granulations, in healing after simple wounds, in many internal diseases, and even in and around other tumours. The last quoted writer, with his own extensive experience, and the still richer opportunities he possesses of examining and comparing at his leisure such a number of specimens of these formations as the great museums and hospitals of London afford, states that for ten tumours consisting of adipose or cartilaginous tissues, which are seldom formed in their pure and typical condition in other diseases, we meet, on an average, not more than one of the fibro-cellular class.

Paget, who has the most fully and best described this form of tumours, says that he has met them most frequently in the scrotum, on the labia vulvæ, in the connective tissue in the sides of the vagina, and in the deeper intermuscular spaces in the thigh and arm. Both the tumour which forms the subject of the present paper and that I before described in the Transactions of the Society of Physicians for the 26th October, 1852^a, had their seat between the inside of the transverse muscle of the abdomen with its aponeurosis, and the peritoneum, in a situation where Paget has not hitherto found such formations. Both these epipерitoneal tumours were quite of the same nature and constitution, and exhibited, in respect to their development and other circumstances apparently connected therewith, a striking similarity^b. Tumours of this kind are in general

^a Hygiea for 1853, p. 174, *et seq.*

^b I beg here to correct the definition I gave, in the part of the Hygiea just quoted, of the tumour I extirpated in 1852 (the first of the kind I had met with), namely, that it was probably a young fibrous tumour. Often repeated examinations of these tumours have convinced me that neither of them can be classed among the fibrous, but that both decidedly belong to Paget’s “fibro-cellular tumours,” or Rokitansky’s alumi-

rapidly developed; they grow more quickly than we usually find so-called benign tumours to do elsewhere, but we ought to bear in mind the distinction already alluded to between actual growth and swelling from imbibed plasma. The tumour I operated on in September, 1852, had not been observed for more than about a year by the patient, who was a very sensitive person and very watchful of herself, yet at the time of extirpation, the tumour was as large as the head of a child. The other tumour, removed in December, 1854, and described above, seems to have been developed still more rapidly, for before the conception immediately preceding (in November, 1853), the patient had not observed the least sign of its presence, and she did not perceive it until her pregnancy had advanced so far, and the uterus had risen so high, that both herself (now pregnant for the third time, and therefore not wholly inexperienced in such matters,) and the midwife considered the tumour, then perceptible in the left side, to depend on an oblique position of the uterus towards the left, and some more solid part of the fœtus projecting in the distance. Even after delivery the midwife asserted that the tumour, which still remained in the side, depended on an unequal and incomplete contraction of the womb. Yet the tumour extended up to the cartilages of the left ribs, near the epigastrium! It probably commenced shortly before or simultaneously with the occurrence of pregnancy, and was therefore at the period of its extirpation of little more than one year's standing, and yet it was but inconsiderably less in size than that operated on in 1852, but was somewhat more succulent, and consequently also of looser structure than the latter.

The rise and development of fibro-cellular tumours are, in general, not attended with any pain or other remarkable symptoms. It is only where the local tension communicates to the surrounding parts an inconvenient and painful amount of pressure—for example where such a tumour is developed in the neighbourhood of the vagina—that the opposite has been observed. The volume and mass these tumours may exhibit sometimes border on the incredible, and, with the exception of the encysted swellings which occur in the abdomen, none others exceed in this respect those now under consideration. Paget quotes from Lesauvages such a case in a man aged 70. The tumour had, it appears, its seat in the scrotum, and when the patient sat with it resting on his thighs it extended upwards to the sternum, while inferiorly it projected over both knees. He had his lap full, as is said,—its weight was 44 lbs. Another case operated on by Lawrence was that of a woman aged 28, labouring under such a tumour proceeding from one of the labia vulvæ, and from the buttock as far as the os coccygis. In the upright position it extended to the knees, was as broad as her two thighs together, and in its greatest circumference measured 32 English inches. The weight

nous fibrous tumours, or fibrous sarcoma. On the other hand, the tumours above mentioned may very well be placed in the class composed of what the French have denominated *fibro-plastic* tumours.

is not stated. At the operation Lawrence could not pass round the part of the tumour which penetrated along the side of the vagina, but cut it off external to this part, consequently leaving a smaller portion. The latter in a short time began to grow again, but was radically extirpated at a subsequent operation performed two years after, and the patient has since, for more than twenty years, continued perfectly well, and without the least sign of relapse. Paget relates many other cases, in which the tumours weighed from 10 to 24 lbs.; all of the same nature, but, as it appears, less than those now mentioned.

This variety of tumours, which are otherwise, in general, of a tolerably uniform and homogeneous nature through their entire mass, are sometimes found to present in their interior scattered cartilaginous tubercles, sometimes partially ossified. Such osseous formations occur both within the parenchyma and on the surface of the tumour. Paget has thrice observed this condition.

The persons in whom these tumours have occurred have all been of or over middle age. The cause of their origin is quite unknown. They are all of themselves of benign character when they occur alone and without complication with other tumours of a malignant kind. Thus it has been found that such complications sometimes, though very rarely, occur, and then they take place in this manner, that an individual with a fibro-cellular tumour gets a cancer in the same or some other part of the body, which, however, never appears in the first mentioned swelling, nor even in continuity with it, but is invariably separated from it. If we except this circumstance, fibro-cellular tumours in general give, so far as we as yet know, a favourable prognosis for extirpation. It is, however, evident, that the size and duration of such a tumour, together with the patient's age, must modify the prognosis; and as, moreover, these tumours, as well as all other organic formations, have their pathology, and are liable to many morbid processes, either produced by external causes or arising spontaneously, they may through them become secondarily dangerous, and may disturb the system at large. To these diseases belong hyperemia, hemorrhage, inflammation with its several results, and especially ulceration and gangrene. Where such changes as these last mentioned have occurred, the patients have often been seen to sink under the consequences of the disturbance they produced, most frequently appearing under the form of pyemia, or with violent and frequently recurring hemorrhage from the ulcerated blood-vessels in the mass of the tumour. The latter is most frequently very vascular, and both the tumours of the kind in question operated on by me, were particularly rich in both large and small blood-vessels.

A remarkable complication, which presented itself in both the cases of epiperitoneal tumour I operated on, deserves to be especially noticed, more particularly as I have not found anything similar mentioned by authors on the subject: it is, that both patients exhibited

a disturbed and morbidly altered action in the nervous centres; in the one case chiefly in the psychical, in the other exclusively in the animal sphere. The patient operated on, in 1852, had, during the year immediately preceding the *perceptible* existence of the tumour, as well as while she laboured under its visible presence, suffered from extraordinary visions, all of which had their origin in a morbidly increased prosopopœia, and during which she fancied that she received visits from, and conversed with deceased persons, both known and unknown, &c. After the extirpation of the tumour these visions completely disappeared, and have not since, so far as I know, returned. Without being herself aware of it, and without my in the least suspecting it, she was, at the time of operation, in the end of September in the year just mentioned, pregnant, and was delivered in the following May of a healthy child, born at the full term. The patient last operated on had, as I have mentioned, fully developed epileptic attacks, which were, however, unfortunately, not removed by the operation; for she had a fit in the night of the 1st of last March; accordingly, after a longer interval than the preceding attack which had occurred in November. Perhaps the phenomena alluded to are, in both cases, to be regarded rather as accidental coincidences, than as complications connected with the presence of the tumours; but as the morbid affection in one instance entirely ceased after the operation, and in the other, so far as we have hitherto had the opportunity of observing, was at least somewhat mitigated, I have considered the circumstance worth mentioning as a guide to future observations in similar cases. That in one patient the epilepsy set in shortly after the commencement of the third pregnancy, is a circumstance which also ought to be taken into consideration.—*Hygiea*, April, 1855, p. 225.