CONTRIBUTION TOWARDS THE HISTORY OF THE DEVELOPMENT OF THE ECHINOCOCCUS, WITH ESPECIAL REFERENCE TO THE FORMATION OF DAUGHTER-CYSTS.

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TRANSLATION BY FERD. VON MUELLER, M.D., F.R.S.

(Continued.)

It is already mentioned, that brood-cells occur, which only contain one scolex, and that the latter most frequently is so tightly enclosed by the cuticle, that the mutual relation between them can easily be misconstrued, whilst it is very clear on other occasions. These brood-cells are developed in the same manner as those above described, which contain several scolices. The parenchyma on the inside of the brood-cyst increases in thickness, the cyst itself grows, and even when it has attained a very considerable size, and received a stratified cuticle, the scolex may still remain unaltered, or merely have fat grains deposited in its parenchyma (Tab. i. fig. 5), but the resorption at last commences in a centripetal direction, and the contour becomes obliterated; finally, the circlet of hooks and the calcareous bodies disappear, whilst the cyst, during all this time steadily increases in size; last of all we perceive merely single calcareous bodies and hooks spread over the parenchyma, and we have once more the first acephalous cystic stage (Tab. i. fig. 8.) We are then hardly able to distinguish those cysts which merely contained a single scolex, from others, which contained several scolices; for the number of hooks is only an uncertain distinctive mark.

Meanwhile, during this development, occur conspicuous shades, which, before they are fully caught by the eye, may easily mislead. Thus sometimes the parenchyma stratum is only feebly developed,
or covered with the scolices rapidly breaking up. We see (Tab. ii. fig. 3) a coronet of hooks, still coherent or spread, which evidently belonged to a single scolex; in the centre generally a more solid kernel, consisting of calcareous bodies and remnants of parenchyma, more or less in a state of fatty degeneration, and on the sides a diffuse extension of those remnants; and thus the supposition is very alluring, that it is a scolex, which, during the dissolution of its parenchyma, is extending in centrifugal direction over the inside of the cell, and thereby forms the parenchyma of the same. This is also Naunyn’s observation, but arrived at in a somewhat different manner. On the other hand the cuticle may even become very thick (from 0, 02.—0, 08. m.m.), just as if the parenchyma were preferentially used for the purpose; and this thick, stratified cuticle now encloses one or more scolices, so that it nearly resembles an encystation.

There is now seen a constant transition from the single scolex-cyst to such as contain two, three, or up to a great number of scolices.

That the scolex is merely playing a passive part during the whole of this development, is strikingly proved, as well on the grounds already stated as by a preparation (Tab. i. fig. 6), which also was found in a secondary cyst. It represents an echinococcus cyst, well developed and with stratified cuticle and parenchyma layer, and in the centre of this a scolex, decapsulated by cuticle-layers, which scolex consequently could not have co-operated in the formation of the cyst, whilst nevertheless the presence of the scolex is an indubitable sign of the development of this daughter-cell from a brood-cell, containing a single scolex. Similar encystations occur as a rule not so very seldom within the daughter-cysts, which still contain scolices. Such we see in Tab. ii. fig. 2, which bears a great resemblance to Naunyn’s Fig. 4. Unfortunately he has no drawings of free scolices in different stages of their development into daughter-cells. We perceive a proportionately thick cuticle and remnants of a circle of hooks within. The anastomosing net, mentioned by Naunyn, which however, by his own description, appears to have been only fatty substance, was not found.

In the meanwhile, I do not believe that these formations of cuticle have anything to do with future daughter-cysts; and I would feel more inclined to consider them as accidental, or, if one prefers to call them so, pathological developments of cuticle from the parenchyma. Closer examinations respecting these circumstances are, however, desirable. Sometimes we see two scolices thus incapsulated (Tab. ii. fig. 4 d.)

It will be clearly seen from the demonstration rendered that I must highly doubt Naunyn’s explanation of the formation of the daughter-cysts from scolices. With exception of the encystation of scolices, as above mentioned, I have found nothing in the numerous echinococcus-cells, examined by me, that could in any manner allow of such interpretation. Yet I dare not deny such a one, as I have not yet had an opportunity to examine echinococcus in sheep; and
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Development of Echinococci.

less so, because Leuckart, who neither had perceived such a development, now states that he had found it in examining material from this animal. Anyhow, I think it may be reserved to future investigations to settle this question, which as yet is based only on observations on a single animal.

It occurs to me that from a theoretical standpoint great doubts arise about such a development, although these must of course give way to direct observations. For even if we view these scolices in the same manner as Max Schultze (22) views Amoebae, fresh water polypes, and similar inferior animals—namely, as protoplasma masses raised into perfectly individual life, which view however is scarcely admissible, considering the stage of development in which they stand; yet one must, according to Naunyn, deprive them of all individuality, break up the harmonious connection between the individual atoms, of which the animal's parenchyma is composed, and with which its life is bound up, and still admit every individual of these atoms to retain the life and creating power of the parenchyma. That is undoubtedly an atomism, carried to its utmost degree, and which it is difficult to admit. Then, it is also striking that a nurse-form, even in the last stage towards sexual maturity, should take a step backwards, and transform itself into an inferior form; and this circumstance not on account of obstacles interfering with its regular development, but after this is entirely finished. The explanation of the development, as given by me, and which is founded on direct observations, appears to me far more natural, and more in accordance with the other stages of the development of the echinococci.

We left daughter-cyst issued from brood-cysts in that stage of their development, in which they altogether resemble the first acephalocystic stage of the echinococcus after transformation of the taenia embryo into a vesicle; but if now a question is raised concerning their later fate, especially the period and manner in which scolices are formed within them, then we meet great difficulties for explaining their direct and gradual progress.

In secondary cysts I have never seen tertiary cysts containing scolices; the only one, as far as I know, who has observed this is Eschricht. He found in a secondary cyst six small cysts of the size of a pea, each of them enclosing five or six scolices, which he supposes to be developed from brood-cells not ruptured. But he does not state the manner in which these scolices were attached to the inside of the cyst; so it remains altogether doubtful, whether they were new formed in an acephalocystic cell, or only remained behind in such brood-cells as were in the act of being transformed into daughter-cells. This is the most probable case, and thereto also Eschricht's statement, otherwise incomplete, seems to point. But I have found in secondary cysts, and especially in larger ones, small cysts, from the size of a hemp-seed to that of a pea, together with daughter-cells, in different stages developed from brood-cells. They have a thick, stratified cuticle, and a parenchyma with calcareous bodies spread over the inside; but no trace of hooks; and they re-
semble also quite the smallest primary or secondary cysts, in which the scolex formation did not yet commence. It is hardly too bold a conclusion to suppose, that the former cysts, just as the latter, sooner or later, for the moment is indeed very variable, will develop scolices in their interior in the usual manner.

The Exogenous Cystformation. In daughter-cells, developed from brood cells in the manner above mentioned, in which still perceptible remnants of scolices can be found, and especially in such as are proportionately large and thin-walled, are seen protrusions from the parenchyma layer resembling hernia-sacs, which push the cuticle on before them. The orifice of the protrusion is sometimes tolerably conspicuous, in other cases very fine and difficult to distinguish in profile. The protrusion, in which both the parenchyma and the cuticle of the mother-cyst are concerned, pushes further ahead by an independent growth; the neck becomes more and more constricted, and then we get a little cell, formed by cuticle layers, with an inner parenchyma, and fixed to the mother-cyst by a thin pedicle; finally it detaches itself entirely, becomes free, and develops itself now like all other echinococcus-cells in the acephalocystic stage. I have not perceived a scolex formation in such daughter cells. If in brood-cells every trace of scolices has disappeared, then we can no longer distinguish these two forms, so different in their development one from the other.

These protrusions can occur repeatedly on a single little cyst, and the one represented (Tab. ii. fig. 1) shows this daughter-cell formation in three different stages. It was found free in a secondary cyst, consequently it is itself a tertiary one, and those developed from the latter exogenously (out of which one, $d$, is just about detaching itself) are quaternary. It is evidently the same development which Kuhn, Davaine, Leuckart, and probably also Naunyn, have had before them on primary cells, but which they have interpreted in a different way. It is not difficult to understand how such appearances may have presented themselves to Leuckart, so that he did not think himself justified in explaining them otherwise, than that the first commencement to daughter-cyst formation took place between the cuticle layers of the mother-cyst; because if we still make use of the figure referred to above, this protrusion, resembling a hernia-sac, will in a certain stage be placed in its hernia canal, the wall of the mother-cyst, whose thick cuticle layer, unless the case is very favourable, may soon cover the fine channel (Tab. ii. fig. 1). Consequently, for examining this condition, these thin daughter-cysts offer incomparably more facility; it cannot be mistaken here. The curvatures in the so-called multilocular echinococcus swelling, as recently described and represented by Friedrich (23) appear to be merely folds of larger cysts in narrow spaces (in this case the biliary ducts), such as frequently appear in the echinococcus of ruminants, but not to be the beginning of exogenous cyst formations, as he supposes. At all events, they have nothing in common with the development described above.
Wherever the cuticle is of a somewhat considerable thickness, generally in larger cysts, a new cuticle layer issues from the intruded parenchyma, in the manner described by Leuckart.

It is not always necessary for the cyst, formed in such a manner, to become free during its growth. I have once seen a cyst, of the size of a pigeon's egg, remaining attached to another somewhat larger one, to the extent of about one-fourth of its periphery; and the partition wall thus formed became consequently common to both. Yet in such cases it must always remain doubtful, whether such a cyst is developed in an exogenous manner from a mother-cyst, or, what I would feel more inclined to assume, owes its origin to a progressive development of one the above-mentioned early separated brood-cells, through the development of both these partitions into daughter-cells. We find sometimes in the wall of larger, thick-walled cysts small, dull-white vesicles, from the size of a pin's head to that of a hemp-seed, with a cuticle so conspicuously thick, that the scanty, brownish interior parenchyma, often furnished with radiated stripes or folds, can not be discovered without considerable compression. They are in all probability cysts arrested in their growth, which have not been able to force their way outwards through the thick wall of the mother-cyst.

It is, however, not often that we find this exogenous daughter-cyst formation; and surely only a relatively small number of the numerous cells, contained in a larger cyst, are developed in this manner. Most of them are formed in an endogenous way from brood-cells. But it is evident from these examinations that wherever the exogenous cyst formation does occur, it commences at an early stage and precedes the development of scolices, and consequently also the endogenous formation of daughter-vesicles.

Now, as regards the signification of this formation of daughter-cells in general, it certainly may be supposed, that it does not indicate a progressive development of generations, because scolices in the daughter-cells show, apart from the individual, no differences from such as are formed in the mother-cyst. All scolices in a compound echinococcus cyst are equally able, under certain conditions, to develop themselves into Tænia Echinococcus. Thus it appears as if this development of generations in harmony with the type of the mother-cyst only happens in the interest of the species; that the mother-cyst's parenchyma, through continual development of brood-cells with scolices, which can only enjoy a lifetime of short duration, is gradually consumed, and that consequently new places of development for scolices, always endowed with strong vital power and ability of development, spring up in this manner. For echinococcus cysts are indeed carried in the human body for a series of years. The daughter-cell formation will thus only become a matter of time, depending on the circumstance that the echinococcus in the human body may be considered as gone astray.

(To be Continued.)
TWO CASES OF OVARIOTOMY.

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In the Australian Medical Journal for January, 1868, I had the pleasure of reporting two perfectly successful cases of Ovariotomy, and in a few preliminary remarks I stated my experience of operative interference in ovarian disease in five cases, four of which were entirely successful and one unsuccessful; the disease in the latter instance proving, when submitted to the test of operation, to be malignant, involving several organs, especially the bladder.

During the past year (1868) I have operated twice, once in the infirmary wards of the Melbourne Lying-in Hospital, and once in private practice. The first has resulted successfully, the second patient died on the fourth day.

I have now, therefore, to state my experience of this operation as seven cases, five recoveries and two deaths, a result which should prove encouraging when we remember the absolutely hopeless character of the disease. This ratio will also bear comparison with the statistics of other operations in Europe and America. I may add that all the patients on whom I have operated successfully continue well.

In my last report I alluded to the various means adopted for securing the pedicle after removing the sac, or tumour, and stated my belief that the extra-peritoneal method was the best. I am still of the same opinion, and the majority of operators continue to adopt it. Further experience also confirms me in the belief that success in this operation is only to be attained by the most careful and unremitting attention to what may at first sight seem to be trivial details; and this remark applies equally to the operation itself, and to the after treatment.

Before proceeding to detail the cases lately operated on, I may state that neither of them was at all favourable; indeed, as will be noted further on, both were almost hopeless, but I could not resist the entreaties of the suffering patients to give them the only possible chance. In the one recovery is perfect, in the other I had the great satisfaction of finding, on post-mortem examination, that death did not ensue from any failure in the mode of operation; and that even had my patient recovered, the relief would have been only temporary, as the tumour was found by Professor Halford to be cancerous.

Case 1.—E. W., aged 33, was admitted to the infirmary wards of the Lying-in Hospital, June 6th, 1868; married ten years; had had four children, the youngest two years old. She stated that her general health had been good until December, 1867, when she began to complain of "shortness of breath" and a general feeling of weakness. About four or five months before admission she had noticed a lump about the size of a hen's egg in the right iliac region.
It was hard and free from pain at first, but as the swelling progressed she suffered very much from severe dragging pains in the right side, and complained much of pain also about the umbilicus. She continued to menstruate regularly, but very scantily, until the last period, when the discharge was somewhat profuse. She was in a most unsatisfactory state when admitted; the journey to town from Lilydale had shaken her very much. She was suffering severe pain all over the abdomen, was exceedingly weak, and considerably emaciated. Absolute rest in bed, warm fomentations, and poultices to the abdomen, with careful attention to the diet, were the only means used for the first month of her residence in Hospital.

On July 8th she commenced to menstruate rather profusely; this continued until the 14th. At this time the swollen abdomen measured as follows:—Round the body at the umbilicus, 40 inches; from the ensiform cartilage to the umbilicus, 8 inches; and from the umbilicus to the pubes, also 8 inches. The uterus was also examined. The os was found healthy, and the sound proved the cavity to be healthy, and of the normal size. The tumour was even on the surface, and fluctuation was distinct. The diagnosis was that of a unilocular cyst of the right ovary, with, in all probability, parietal adhesions, but no pelvic adhesions. She continued to suffer a great deal of pain in the right side of the abdomen, and also from irritability of the stomach; but, on the whole, she gradually improved from the time of her admission. Poultices of linseed-meal gave much relief. Ten grain doses of Bromide of Potassium in Infusion of Columba three times a day also proved beneficial. Slight menstruation recurred again in ten days, and continued for nine days. She steadily increased in size, and it was determined, after consultation, to tap the tumour as soon as the uterine discharge ceased.

August 2nd.—A full-sized trocar was introduced midway between the pubes and the umbilicus. Nine pints and a half of coffee-coloured fluid of the consistency of thin sago were drawn off. The sac was fully emptied, and a solid tumour, about the size of a small orange, was felt at the right side. She expressed herself as feeling much relieved, but the next day she commenced to suffer from great irritability of the stomach, and shooting pains in the abdomen. A mixture of Bi-carbonate of Potash with dilute Hydrocyanic Acid and Tincture of Columba was prescribed, and the poultices were reapplied.

August 4th.—Urine very high coloured, abdomen tender to touch, skin hot; had one Calomel and Opium Pill, followed by a mild laxative. The next day or two she was rather better, but continued to complain of pains in the abdomen, which was also gradually swelling.

August 9th.—Began to menstruate profusely; the discharge was most offensive, and it continued five or six days.

August 17th.—Has continued much the same since the last note. She now complains of her mouth being sore; and, on examination, the whole of the mucous membrane lining the mouth and fauces is found to be aphthous, the tongue covered along its margin with
small blisters; pulse 126 and weak. She was ordered the following mixture and gargle:

R Potass. Chlorat., 3 ii.
Acid Muriat., dilut., 3 ii.
Tr. Ferri Muriat., 3 iij.
Syrupi, 3 i.
Infus. Columbae, ad 3 viij. M.

To take a tablespoonful every three hours in water:

R Potass. Chlorat., 2 iij.
Acid Muriat., dil., 3 iij.
Aqua font., ad 3 xij. M.

To be used as a gargle frequently.

This treatment was continued until the 22nd. The mouth steadily improved, and the pain in the abdomen was less. She now measured 40 inches round, and 9 inches from the ensiform cartilage to the umbilicus, and the same from the umbilicus to the pubes. The next day she said that she felt very sore where the trocar had been introduced; and, on examination, the seat of puncture was found inflamed and pointing. This was opened with a lancet, and about three ounces of thick healthy pus escaped. A poultice was applied, and when the poultice was changed a quantity of thin pus was found to be flowing from the wound. The patient felt great relief. From this time until October 4th the discharge continued in varying quantity, gradually getting less, and at last entirely ceasing (the puncture having healed). The treatment during this time was Quinine with Acid in bitter infusion; one grain pill of Crude Opium at bed-time, and occasionally, when the pain was severe, copious nourishing diet, and brandy in full doses. The opium pill seemed to have a most beneficial effect, and was eagerly looked for by the patient. The abdomen had now filled up to about the same size as before tapping, and it became necessary to decide on further action.

A consultation was held on October 3rd. Present: Dr. Martin, Dr. Motherwell, Mr. Garrard, Mr. James, and Mr. Avent (resident surgeon. Two courses of procedure were debated—either to re-open the sac, insert a drainage tube, support the strength as far as possible, and thus try gradually to obliterate the disease; or, to proceed to operate for the excision of the tumour in the ordinary way. It was unanimously decided to adopt the latter course. The existence of the solid mass felt, after tapping, indicated smaller cysts, which would doubtless develop even if the large cyst should become obliterated. The patient was most urgent in her entreaties to have the radical operation performed, and as she was improving daily it was determined to wait until she was a little stronger, and her next menstrual period had passed. A slight irregularity took place in the recurrence of this function, and she did not commence to menstruate until the 24th. All discharge had ceased on the 29th, and the "period" passed over more naturally, and with less pain, than had been the case for several months past. The bowels were now
thoroughly cleared, and tepid baths given night and morning for a few days.

November 2nd.—Proceeded to operate at 3 p.m. I was, as on former occasions, most kindly and ably assisted by Dr. Motherwell (who administered chloroform), Dr. Martin, Mr. James, Dr. Fetherston, Dr. Black, Dr. Graham, and Mr. Avent. There were also present Assistant-Surgeon Corbett (14th Regiment), Dr. Neild, Dr. Fulton, Dr. Bowen, Mr. Pugh, Mr. Ford, Mr. Gray, Mr. Fletcher, Mr. Gillbee, Mr. Girdlestone, Mr. Wooldridge, Mr. Blair, Dr. Hardy, Mr. Stokes, Dr. Maunsell, and Messrs. Ashworth, Kirkland, and Thomas (University Medical Students).

An incision about four inches long was made in the usual manner. The tissues in the neighbourhood of the puncture were found enormously thickened and so matted together that it was found impossible to divide the several layers on a director. A fistulous opening was found passing from the externally healed seat of the puncture to the sac, and when this was interfered with, thick healthy-looking pus issued from the sac. On passing in the hand, strong adhesions were found to exist all over the anterior surface of the tumour, and extending down low into the right iliac fossa. These were broken down, with more or less difficulty—only two required the knife. There was pretty free hemorrhage from several points. When the tumour had been freed from all parietal adhesions, the large trocar was introduced, and about six pints of thick laudable pus drawn off. Traction was now made on the sac, and it was found to be adherent to the omentum over a considerable surface in front and at the right side. These adhesions were pretty easily separated, and the clamp was put on. The pedicle was of good length, and very thin; it was secured in the usual manner, transfixed and tied at both sides, a circular hemp ligature applied behind the point of transfixion, and the sac removed. The cavity was then well sponged out; three or four bleeding points were found in the torn edges of the omentum. These were tied with fine silk, and the ends cut off short. A little time was allowed to elapse to watch for bleeding, especially as there was considerable oozing where recent adhesions had been broken up in the right iliac fossa, the parts meantime being well covered up with hot wet flannels. Several coagula were finally sponged out from the pelvic cavity, and the bleeding having ceased, I proceeded to close the line of incision. After putting in the two upper pins, great difficulty was experienced in bringing the edges at all together, for the tissues, as before remarked, had become so thickened and indurated from the effects of inflammatory action in the track of the trocar incision, that it was almost impossible to approximate the edges neatly. Extreme care was therefore taken to include the edges of the peritoneum, and closely apply them from each side, so as to insure early union there, failing union by first intention in the external edges of incision. There was a great strain on the two centre ligatures; the lower pin was made as usual to transfix the pedicle, the edges of peritoneum taken up here also, and closely
tucked round so as thoroughly to isolate the extruded portion of the pedicle. The clamp was removed, the redundant portion of the pedicle trimmed, the superficial wire sutures introduced, and the patient made thoroughly dry and removed to bed, which was as usual prepared with hot bottles, &c. Three long straps of adhesive plaster were applied, so as in some measure to relieve the strain on the two centre pins; a sheet of cotton wool was placed over the abdomen, and fixed by a flannel roller. For the reasons before mentioned, the operation occupied nearly an hour. Patient bore the chloroform very well. There was no vomiting.

6 p.m.—Has rallied fairly; is quite conscious; the pulse 96; takes a little iced sodawater.

8 p.m.—Complains of pain in the abdomen; asks for her Opium pill (1 grain), which was given; 2 oz. of very offensive urine drawn off; linseed meal poultice over the abdomen.

11 p.m.—Slightly sick once; skin soft and cool; pulse 100.

1st day, Nov. 3, 8 a.m.—Slept a little; sick twice; no straining; has had 2 gr. of Opium; no pain; the pedicle dressed with the charcoal bag; to have a little chicken broth; passed the rest of this day pretty well.

12 p.m.—The line of incision was found to be very tight in the centre, two small bullae had formed, and there was slight oozing of pus. Dr. Martin and Mr. James agreed that these ligatures must be let go. I passed a line or two of fresh silk under each of the two centre pins, and then cut away the tight ligature. This gave great relief; fresh strips of adhesive plaster applied; pulse 136.

2nd day, Nov. 4, 8 a.m.—Slept fairly; 9 oz. of urine drawn off at 5 a.m.; pulse 126; feels comfortable; the two next ligatures to those that had been cut last night required setting free; pedicle fast separating.

3 p.m.—Complains much of flatulent distension; great tenderness on pressure over one spot a little to the left of the umbilicus; looks anxious; gave an enema of soap-suds oil and Tr. Assafcetid.

R Hyd. Chlorid.
Opii Crud. Opt., aa, gr. xii. M.
In pil. xii. divide.
One every three or four hours.

6 p.m.—Slept a little; feels easier; the poultice has been constantly applied; a little of the enema returned; no faecal matter; pulse 132; has brandy and sodawater with ice as she wishes it.

11 p.m.—Expressed a wish to be turned on her right side, and as soon as this was done she vomited a good deal of sour fluid, which relieved her much; inclined to sleep; is free from pain; pulse 136.

3rd day, Nov. 5, 8 a.m.—Slept occasionally; says she has no pain nor fixed tenderness in any part of the abdomen; the distension is, however, about the same; had 8 oz. of brandy yesterday, and 3 oz. during the night; has taken five of the Calomel and Opium pills altogether. The pedicle came away when dressing it; pulse 156, and compressible. The external edges of
the wound slightly sloughy at one spot; dressed with lint dipped in solution of Permanganate of Potash; turned her on her left side and gave an enema consisting of a pint of strong beef-tea with 2 oz. of brandy. To stop the pills.

2 p.m.—The beef-tea and brandy enema was entirely retained; is free from pain, but very low; pulse 150. The beef-tea and brandy enema was now repeated, and again at 7 p.m. The vomiting has ceased; takes a little brandy and water occasionally.

5.30 p.m.—Bowels have just acted freely; healthy faecal motion.

11.30 p.m.—Gripping pain, followed by another full motion; removed all the pins except the lower one; the pain in the abdomen is of an intermittent character, like colic; strapped the wound, and gave an enema last thing containing 1 drachm of Battly's Liquor Opii, 1 oz. of brandy, and 3 oz. of beef-tea essence; pulse 148.

4th day, Nov. 6, 8.30 a.m.—Did not retain the enema very long last night; had 1 gr. of Opium; no vomiting; slept two hours; distension of abdomen less, except along the transverse colon; had one motion from the bowels in the night; passes water freely; removed the last pin; dressed the wound with Permanganate of Potash lotion; to continue the beef-tea and brandy enemata; pulse 130.

5th day, Nov. 7.—Small enemata of beef-tea and brandy have been given every four hours; she feels much better; passes flatus freely; the wound suppurating at lower part, and is looking very healthy; she began to menstruate slightly during the day; ate some boiled chicken; pulse 120.

Further detailed report is unnecessary. The patient continued steadily to improve. She menstruated freely and without pain in December, and left the Hospital quite well on the 19th December, returned to Lilydale the same day, and she has quite lately reported herself as doing very well.

Remarks.—This case presented many points of interest. It will be noted that the patient improved in strength, and put up flesh from the time the external opening where the trocar had been introduced had healed; although six pints of pus remained stored up in the cyst. An important point in the operation suggested itself, namely, the undesirability of being too hasty in closing the wound while bleeding points were oozing, and the entire removal of the coagula from the pelvic cavity.

In the after treatment there were two very critical periods, first, the setting free the tight ligatures on the second night. If this had not been done, there would have been much sloughing. Here was illustrated the absolute importance of having the two surfaces of the peritoneum closely in contact; union takes place here very speedily, and the cavity of the abdomen is hermetically sealed against the influx of any pus that may form in the external wound. My readers will remember the great stress laid on this plan of procedure by Mr. Spencer Wells, in his earlier essays. In this, and indeed all, the other details both of operation and after treatment, I have closely followed his advice. The second critical
period was on the third day, when the pulse was 156, and very weak, the stomach irritable, the belly distended; the administration of the small enemata of strong beef-tea with brandy, fulfilled all the indications. I feel certain she would have sunk had we attempted to press nourishment or stimulants on the stomach. On examining the cyst, it was found to be very much thickened, and contained one large and four or five semi-solid cysts imbedded in its walls.

**Case II.—Mrs. W., aged 35.** Had been married at sixteen. By this marriage she had had three children, and was left a widow at twenty-one. She married again five years after, and had five children by this marriage, the youngest fifteen months old, was suckled for eleven months. This history was given at my first visit to this lady in September last in consultation with Mr. Stokes of Prahran. She also stated that she first felt a firm hard swelling on the lower part of the abdomen about four months before my visit. She had menstruated about six weeks before she noticed the swelling, and never since. She was positive that the swelling was centrally situated from the first. Complained much of a cold, benumbing feeling about the loins, with, to use her own words, continual pain on the lower part of the bowels. On examination a firm but elastic swelling was found occupying the space from the umbilicus to the pubes quite central—about the size of a five months' pregnancy; no fluctuation. The fact of menstruation having appeared just before weaning her infant, and not again recurring, gave some colour to the supposition that our patient might be pregnant. No placental bruit, nor foetal-heart-sound could be detected. The diagnosis, in short, was doubtful, so that after consultation we decided to wait a few weeks. The diagnosis was easy enough in a month, for the growth of the tumour was very rapid. The surface of the growth became irregular. The patient's health began to suffer, and the emaciation about neck and shoulders, so characteristic of ovarian disease, became very marked. On October 19th, she measured forty inches round. In a week or two more the breathing became very much impeded, and the recumbent position could not be borne. On October 26th, in conjunction with Mr. Stokes I introduced a trocar in the linea alba; only about a pint of gelatinous fluid could be got to flow; although the most fluctuating portion of the tumour was selected. It was evident that the tumour was semi-solid, or at any rate composed of a number of sacs. The aspect of the patient was thoroughly malignant, and she found it almost impossible to take food. The case was altogether a most unpromising one, but the patient was very anxious to have the operation performed. She was a most intelligent lady, and was thoroughly aware of all the dangers of the operation, but felt convinced that the disease was making such rapid strides that no chance remained but the one afforded by operation. It was, therefore, impossible to refuse.

November 18th, I proceeded to operate. Dr. Motherwell gave chloroform, and I was again most ably assisted by Dr. Martin, Mr.
Dr. Tracy on Two Cases of Ovariectomy.

James, Dr. Fetherston, Mr. Stokes, Mr. Avent, and Dr. Graham. An incision about five inches long was made in the usual manner. A very large vein was opened in this incision. This was secured before the peritoneum was opened. The walls of the abdomen were exceedingly thin. When the tumour was brought into view, it was found to consist of a congeries of sacs of exceedingly brittle texture containing gelatinous matter. On introducing the hand, strong parietal adhesions were found all over the anterior surface. The omentum was also adherent over a large surface. When these were separated I commenced to extract the tumour, breaking down the cysts, and pressing out the contents. This was a work of no little difficulty. The mass was very large; the entire lumbar regions were filled with it, and it extended up so as to displace the diaphragm. On bringing it all out, the pedicle was found to be of a pretty good length from the left side. It was thin but broad, and exceedingly vascular. At this stage the patient became collapsed. The shock of removing such an immense mass was almost a fatal blow to her very weak circulation; and had it not been for the exceedingly judicious way in which Dr. Motherwell had regulated the administration of chloroform, and the prompt manner in which Mr. James supported the diaphragm by pressure, when the diseased mass was withdrawn, my patient would have died during the operation. There were no visceral adhesions; the pedicle was secured as in the former case. The cavity of the abdomen was sponged out, and while doing this a piece of the diseased structure which had broken off during extraction, was found loose in the pelvic cavity. There was no haemorrhage after the pedicle was secured. The operation was completed very quickly, and the wound closed as before described, and the patient placed in a warm bed. I remained with her for several hours. Reaction was very slow; consciousness, however, returned very soon, and she expressed herself as free from pain, and glad the operation had been done, as she could now breathe easily. During the night the sickness was rather troublesome. Small beef-tea and brandy enemata were given every four hours, and much comfort was derived from sucking ice. Poultice over the abdomen.

Next day the wound was found to be healing by first intention, but the patient was more sick and weaker. There were cold sweats, and an exceedingly rapid pulse. On the night of the second day tympanites and muttering delirium came on. On the afternoon of the third day extreme pain was complained of in the two outer toes of the left foot. These were found on examination to be cold and of a purple colour. During the night coma set in, and she died early on the morning of the fourth day.

Post-mortem examination made twenty-four hours after death by Mr. James, Dr. Martin, and Dr. Motherwell. The walls of the abdomen were reflected from above, the line of incision was found closed. The peritoneal surfaces firmly united; intestines distended with flatus, and covered with a blackish exudation. There were no adhesions except a very slight one of a small portion.
of small intestine to the inner surface of the incision. There was about a pint and a half of dark-coloured serum in the pelvic cavity. The portion of omentum that had been cut was carefully examined. The ligatures on the vessels were in situ. There was no inflammatory action, nor any adhesions to the neighbouring parts. The uterus was healthy; the right ovary was atrophied; the kidneys healthy. No portion of the diseased mass had been left.

Remarks.—Professor Halford very kindly examined the diseased structure, and had no hesitation in stating the disease to be colloid cancer. Although the tumour was large to appearance before the operation, I was not prepared to find such an enormous mass at the back part, the drain on the patient's strength from its exceedingly rapid growth must have been terrible. The body was thoroughly emaciated. This very rapid growth also pointed to the probability of its being malignant, and, although Death claimed his victim, it was some consolation that the poor patient's last hours were comparatively free from pain, and that her death was rendered much more easy than it would have been had no operation been performed.

190, Collins-street East, 18th January, 1869.

MEDICAL SOCIETY OF VICTORIA.

ORDINARY MONTHLY MEETING.

WEDNESDAY, FEBRUARY 10, 1869.

The President, Dr. Bird, in the chair.

Present:—Dr. Bird, Dr. Bowen, Mr. Blair, Mr. Wooldridge, Professor Halford, Dr. Black, Mr. Avent, Dr. Macarthy, Dr. Graham, Dr. P. Smith, Mr. Girdlestone, Dr. Day, Mr. Gillbee, Dr. Neild, Dr. Thomas, Dr. von Mueller, Dr. Jonasson, Mr. Rankin, Dr. Hunt, Dr. Haig, Dr. Motherwell.

ELECTION OF NEW MEMBERS.

Dr. Maunsell was unanimously elected a member of the society, and Mr. Fitzgerald's name was re-entered upon the roll.

PRESENTATION OF BOOKS.

Dr. Neild presented, on behalf of Council of the Royal Society, a set of the transactions of that body.

CORRESPONDENCE.

A letter from Dr. McCrea was read apologising for his absence and stating that he was preparing some statistics on the subject of variola.
Dr. Thomas on Variola and Varicella.

PATHOLOGICAL PREPARATION.

Professor Halford exhibited a fibrinous cast from the trachea of a dog which had inhaled sulphurous acid. Professor Halford deduced therefrom the conclusion that the use of an over strong preparation of this agent might be deleterious, and do more harm than good. The strength he had used was one part to eight.

A conversation resulted in which the opinion was expressed that the specimen seemed to suggest that diphtheria was a local and not a general disease.

The following paper was then read by the author:—

ON VARIOLA AND VARICELLA. By D. J. Thomas, M.D., F.R.C.S., etc.

Mr. President and Gentlemen—

I confess I have complied rather reluctantly with the request of the secretary of our society to make a few remarks on the subject of the disease recently re-introduced into the colony, and as to the nature of which so many conflicting opinions have been expressed by members of the profession.

It is but right that I should candidly inform you that any little experience in the general practice of my profession which I can lay claim to, has been mainly gained during the last thirty years in this colony, where no case of small-pox came under my notice until the recent outbreak, although I had abundant opportunities in my early career, and during my recent visit to Europe, of observing the complaint in all its various phases.

It must not be supposed that variola has only of late made its first visit to this colony. When I arrived here, in the beginning of 1839, I saw several blackfellows of the Yarra, Goulburn, Geelong, and other tribes, all of them rather advanced in years, having the pits of small-pox. The only answer they could give to my queries as to where and how they got it was, "Big long time Dibble Dibble come, plenty kill him black fellow." There is no doubt that it had been introduced long before, and extended over various parts of the country. In speaking of the subject to a friend of mine, nearly as old a colonist as myself, he mentioned several cases which came within his knowledge. He wrote to me, at my request, a short account, which I shall have pleasure in reading:—

"My Dear Thomas,—I think it will interest you to know that I observed among the aborigines on the Yarra, about twenty-nine years ago, one or two individuals deeply pitted with the small-pox. I have also seen traces of the same disease among the blacks at Port Lincoln in South Australia, as well as among the Loddon and Lower Murray tribes. In every case the person so marked appeared to be upwards of fifty years of age. When Governor Phillips arrived with the first importation of convicts at Botany Bay, natives were found among the caves and rocks dying from small-pox. You will find this mentioned in the journal written by my uncle, Admiral
Small-pox was brought to this colony by the ship Commodore Perry, on September 12, 1857. In Melbourne thirteen cases broke out; in Gisborne, to where some of the passengers had gone, two cases occurred; on board ship one, making a total of sixteen. The number of deaths were four, or twenty-five per cent. There were several circumstances connected with the Avonvale to remind one of the Commodore Perry. Both ships anchored in the Bay on account of the captains not truly reporting the occurrence of the disease at sea. The majority attacked were adults, and chicken (i) pox was co-incident with it; however, by the care, attention, and vigilance of the chief officer, Dr. M'Crea, it was swamped before it had a chance of committing much havoc. That the community should be smitten with alarm is not to be wondered at, considering the devastations this dire disease has committed at various periods in various parts of the world. Its ravages are said to be especially great in warm latitudes, and although at its outbreak it may not manifest itself in a very severe degree, nevertheless, it, like many other diseases, may as it progresses become most malignant and deadly. It therefore behoves us to employ all the means within our power to annihilate it at once, if that be possible. I need scarcely tell you that the terror which has been excited in the minds of many has not been without cause, for all who saw the two first cases which broke out in the Melbourne Hospital, from whence they were transferred to the Immigration Hospital, were unanimous as to the disease being small-pox, but as to the nature of the four succeeding cases in the latter institution opinions were divided,—some considering the disease to be variola, some varicella. In consequence of such discrepant views, and to set the public mind at rest, the hon. the Chief Secretary appointed a commission of eight medical men to inquire into and report upon the cases. The result was want of unanimity—four considered the outbreak to be variola and four looked upon it as varicella. The disorder likewise made its appearance in Greensborough, a village about twelve miles from Melbourne, where about a dozen people have been attacked with what one portion of the faculty say is variola in a most unmistakable form, whilst another portion are quite as certain that the disease is varicella. One case has broken out in Diamond Creek, a place five miles distant from Greensborough.

When such a disagreement exists amongst medical men, we are naturally led to inquire into the reason of such disagreement. It may be accounted for—1st. From the fact that very few have opportunities of seeing true small-pox in the present day, owing to the modifying or preventive effects of vaccination; therefore, not
many can give an opinion founded on observation; 2nd. The want of means of testing microscopically, chemically, or otherwise, the nature or essence of the poison which gives rise to the phenomena of the two diseases under question; 3rd. From too much reliance being placed upon the artificial classification, to the neglect of the natural division or constitutional complication. According to the former arrangement, varicella comes under the order vesiculæ, and variola under that of pustulæ. Now, we know that what is called by one class of doctors varicella, in an aggravated form frequently advances to the pustular stage, of which there are three varieties—the umbilicated the globular, and the conical pustular varicella. Again, small-pox may exist without any eruption whatever (variola sine variolis); so may varicella (varicella sine varicellis), therefore, relying upon the artificial classification, one may be misled, and if a patient should die of either of these so-called by some distinct diseases without any manifestation of eruption, it cannot be said that the cause of death was confluent, or any kind of small-pox, nor any form of pustular or vesicular varicella. All that could be said would be, that they died from either variola or varicella sine eruptione, but of which it could not be told, as no eruption had shown itself. If as much attention were paid to the natural or constitutional effects as to the skin eruption, I think we should have a more clear idea of the disease, and the conclusion arrived at then would be that varicella is but a modified form of variola, checked at different stages of its progress, whether they be vari, vesiculae, or pustulæ. The name varicella being the diminutive of variola, gives the notion that those who so called the affection must have had a keen idea of its being a slight kind of variola; indeed, the great points of distinction laid down by authorities are few. They are as follow:—1. The fluid in varicella is limpid throughout except in a few anomalous cases. 2. The fever preceding the eruption is very slight and of short duration; there is no secondary fever at the time of maturation or desiccation. 3. The fluid in varicella concretes into scabs about the third or fourth day; this in small-pox does not occur before the eleventh day, and frequently much later. 4. The scabs when they fall off in varicella leave no marks behind as they do in variola. 5. Absence of the peculiar odour in varicella. The above are diagnostic signs laid down by some; they are not, however, sufficiently marked to my mind to constitute varicella a disease sui generis, for the following reasons:—The anomalies are too numerous to look upon them as exceptions. Varicella is often purulent; indeed, some class it amongst the pustular. The preliminary fever is often severe, and secondary fever may occur in an aggravated case of varicella, and a brisk attack of varicella leaves cicatrices behind. Varicella runs through all the courses of variola, but in less time and not with such violence, and mild cases of variola leave no marks or pits. Those who are of opinion that it is so describe three varieties of varicella, viz., chicken-pox (varicella vesiculæsa), swine-pock (varicella conoide), hives (varicella globuleuse). Chicken-pox is the mildest form, but the three forms often exist at
the same time and on the same individual, and it is seldom that a typical case of variola or varicella comes under the notice of the practitioner.

The best description of the disease that I have read is that by the great English dermatologist, Mr. Erasmus Wilson. It is not very long, and, with your permission, I will read it. I had some conversation with Mr. Wilson when I was at home on this very subject, and when he informed me that the varicella virus would produce, if inoculated into an unvaccinated person, small-pox, I was satisfied on the very point that I was doubtful of before. He says:

"When small-pox prevails as an epidemic it develops itself in a number of forms, some remarkable for their severity, and others for their exceeding mildness; a medium state between these two extremes has been denominated benignant small-pox. This form, and the most serious varieties of the disease, are characterised by the appearance of eruption, pursuing a given course within a given space of time, and presenting a regular succession of alterations. On the other hand, there are several forms of eruption resulting from the same variolous contagion, which are deficient in the characters needful for their consideration with the preceding group. They are much milder in their local, and for the most part in their constitutional nature, and their course is limited to a shorter period. It is to this second group that the term varicella (modified small-pox) properly applies, and under this head I shall proceed to describe the different varieties which small-pox, in its modified form, is capable of assuming.

"Variola, it has just been observed, occasionally appears in its varicella form without any obvious cause, the modification probably depending upon some present state of constitution of the individual. Thus it not unfrequently happens that a single member of a family may be affected by varicella, while several others of the same family have true variola. But the individual so affected with varicella in this instance may, during a future epidemic, be attacked with genuine small-pox. At other times, and these are more frequent, the eruption is modified by that state of constitution which succeeds to vaccination, inoculation, or a sporadic attack of small-pox. Hence, after the preparation of the system by either of these affections, the contagion of variola gives rise generally to varicella, and but rarely to the genuine small-pox. If other proof were needed of the close relation subsisting between variola and varicella, it would be found in the fact that the latter is infectious and contagious, and is capable of communicating true variola to a sound person.

"Varicella, in this point of view, may be regarded as an arrest of development of variola, and the forms which it is capable of assuming may, consequently, be deduced from the observation of the natural course of small-pox. Thus, if the variolous disorder were to expend itself in its first stages, we should have a varicella resembling the papular eruption of small-pox, in other words, a papular varicella; if the variolous disorder progress beyond this stage, we shall then have a vesicular varicella, and if it proceed still further
a pustular varicella. The latter, however, is capable of presenting some modifications. In one of these the contents of the conical vesicles are simply transformed into a purulent fluid, without any alteration of their form. This constitutes the conical pustular varicella. In another, the purulent fluid distends the vesicle to so great an extent that it presents a globular figure. This is the globular pustular varicella. While in a third the pustules assume the characteristic features of those of variola, being flattened and umbilicated. This, which is the most advanced grade of varicella, is the umbilicated pustular varicella. Moreover, it has been remarked that in varicella, as in variola, the constitutional affection may be present without the eruption, constituting varicella sine varicellis.

"It must not be supposed, however, that any of these forms occur singly. The distinction is intended merely to apply to the general predominance of one or the other, for each variety is more or less commingled with the rest, and in some instances all the forms appear upon the same individual in nearly equal proportion.

"Varicella makes its invasion with symptoms resembling those of small-pox, but much milder in degree. In some instances they scarcely amount to more than mere indisposition, while on the other hand they may be severe. The chief of these symptoms are feverishness, uneasiness at the epigastrium, nausea, vomiting, pains in the loins and in the head, with accelerated pulse. At the end of a few days, usually three or four, the eruption makes its appearance in the form of red points and spots, which resemble those of small-pox. The constitutional symptoms are relieved by the eruption, and gradually decline. The eruption, however, proceeds on its course, advancing, if it be of the pustular kind, quickly through the papular and vesicular to the pustular stage, arriving at its height by the fourth or fifth day, and then declining without any increase of the constitutional symptoms, and without the secondary or suppurative fever which occurs in small-pox. The pustules speedily dry up, and form then brownish scabs, which fall in another few days, and leave but a slight and transient pitting of the skin, with a few discoloured red or purplish spots. When, however, the pustules are broken and lacerated by scratching, cicatrices of small size occasionally result. Varicella in its progress is accompanied by a broad and patchy areola of a pale red colour, which contracts its boundaries as the pustule advances, and ultimately forms a narrow brownish circle around its circumference."

Because varicella has occasionally appeared as an epidemic, especially that recorded by Dr. Möhl, of Copenhagen, where it appeared for many years without concomitant small-pox, it satisfied the physicians that their sources were distinct. But we should bear in mind that there are other affections which show as great a diversity in the various aspects they assume as do the varieties of small-pox; take, for illustration, scarlet fever, erysipelas, or diphtheria.

When scarlet fever breaks out in a town, or in a school, the effects to be observed on the system vary very much in
different individuals. Some may be overwhelmed in a few
hours from the intensity of the poison without any skin affection;
others may suffer from the malignant form; others may be
attacked with scarlatina anginosa; and others, whose constitutions
are so indisposed to the influence of the materies morbi, have
it displayed on the surface merely as the scarlet rash, which
requires no treatment and no confinement. Erysipelas, when it
breaks out in the wards of a hospital, may manifest itself in the
most violent phlegmonoid form in one patient; while another, who
occupies the next bed, may have a slight attack of the oedematous
kind; whilst a third shows nothing more than erythema.
Diphtheria, again, may rage in a most fatal form, or it may be so
mild as to be scarcely recognised; or it may exist in all the
intermediate states between these two extremes, amongst members
of the same family, and at the same time. Any of these maladies
may, and often do, attack communities in the mild form, and
perhaps for a succession of years; therefore it is not at all singular
that variola should occasionally prevail in its mildest or varicellar
form. Yet this circumstance is one of the strongest reasons brought
forward by some that varicella is dependent upon its own specific,
distinct poison, and not in any way connected with variola.

I had the honour to be one who formed the commission I have
before alluded to. This brought me into communication with the
four patients at the Immigration Hospital. I had previously seen
the patient who introduced the disease from on board the Avon Vale,
and I shall describe the cases as they came under my notice.

Nov. 27.—9 p.m.: At the request of the resident house
physician I saw Webster, who had been admitted that morning
from the Avon Vale, as it was doubtful whether he had small-pox
or not. The doubt arose in consequence of a passenger on board
the same ship having died from a skin disease, which some said was
small-pox. At that time I did not consider he had small-pox. His
head was affected; he had great pain; he spoke incoherently; his
tongue was dry and black; his eyes red; his gums spongy, and
bleeding; his body was covered with petechiae, so were his limbs
and face; the latter had, in addition, especially on the forehead,
large vibices. He had oedema of the lower extremities, and foul
breath. I considered it to be scurvy, with fever; indeed, it looked
like petechiae or spotted fever. However, in four days afterwards I
saw him at the Immigration Hospital, whither he had been
removed, in consequence of the chief medical officer having pro-
nounced the case to be one of small-pox. His face was covered
with vesicles merging into the pustular state, coherent, and in patches
confluent. His body and limbs were also studded over with an
eruption of the same kind. There was no doubt as to this being a
case of recognised small-pox.

The following are from notes I took at the time:—

Case 2—January 9.—Blair, aged thirty, has been indisposed for
three weeks. First noticed the eruption on the 1st January, nine
days ago. Face thickly, body and limbs more sparingly, covered with little bladders situated on a slightly inflamed base. These were not all in the same state of development, especially those on the face. Here are to be observed pimpls, and the contents of some of the little bladders were clear and limpid—that of others of a dirty yellowish colour, and sero-purulent; fauces and throat congested. Has been vaccinated. Mild small-pox.

Case 3—Same date.—Tagart, aged twenty-eight; rash appeared on the 3rd (six days ago), was preceded by no indisposition. Contents of cells are of a pustular character, and are beginning to pucker and scab over. No pain nor fever. Has been vaccinated. Face more thickly covered than any other part of the body. A varicellar form of variola. (hives.)

Case 4.—Levy, aged seventeen, eruption first appeared January 1; has a breaking-out on the face, body, and limbs. The contents, which are large and globular, are of a sero-purulent character. This I look upon also as hives—the globular pustular varicella of those who admit the identity of the two complaints. Was sick and unwell for three or four days before the rash appeared. Has been vaccinated.

Case 5.—Douglas, aged fifty, was sick and feverish on January 2; eruption appeared on the 5th. It is now thick on the face, and scattered on the body and limbs. Has sore throat, fauces swollen and congested, vesicles large and flat. Looks like a case of mild small-pox. Has been vaccinated.

I considered Webster’s to be what is called true small-pox, and the four other cases to be modified small-pox, but still capable of producing small-pox in the unvaccinated. I believe in the unity of variola and varicella, and that both are the product of the same unknown animal poison, differing only in intensity. My reasons for stating them to be small-pox are—1st, All the cases were running their course when I saw them; some were in the vesicular and some in the pustular state; had they been chicken-pox they would have shrivelled on the fourth or fifth day. 2nd. The face was more thickly covered than any other part of the body—a circumstance almost unknown in chicken-pox. 3rd. The patients were all adults: as a rule varicella is a disease of childhood. 4th. It is known that small pox was treated in the hospital a few weeks previously to the second outbreak, and those subsequently attacked lived in a lane immediately adjoining the hospital. This is strong circumstantial evidence that the disease is contagious. The disease can be traced to Greensborough, through the medium of a young man who carted wood from that neighbourhood to the vicinity of the Immigration Hospital. Dr. Helm reported twelve cases—since then there have been two—and one at Diamond Creek, making in all fifteen, these, added to the eight cases in the Immigration Hospital and Royal Park, make a total of twenty-three, out of which number four deaths have occurred, or 17.39 per cent.

Another convincing proof of the sameness of the diseases I am speaking of is, that a Mrs. Watmough suffered from it, and during
the period of its progress gave birth to an infant, who became
affected some days afterwards; and the most staunch believers in
the varicella theory agreed that the infant died of true small-pox.
Where did it get it from, unless from the mother? As small-pox
is not generated de novo, this is rather a convincing proof that the
mother, who was affected similarly to the others, had variola in
some form or other, and not varicella, as a separate disease.

Knowing that many outbreaks have made their appearance in the
Australian colonies, and have not perpetuated themselves, I think
this climate is not favourable to its growth. I am not aware of any
other country where it once has made its appearance that it has
been swept out, excepting this country. That it could not fix itself
upon the blacks I can readily conceive. They live in the open air
—are constantly wandering about—wear very few clothes—a very
different mode of life to that of civilised people, who live in pent-up
rooms, frequently where no escape of the poisoned air can take
place. Great credit, I think, is due to Dr. M'Crea for the
successful manner in which he to, at present, all appearances, has
stamped out the disease lately introduced, as he did that in 1857.

In the discussion which followed,

Mr. Girdlestone, though not prepared to debate the point as to
the common origin of variola and varicella, was yet inclined for prac-
tical reasons to continue to regard them as separate diseases. He
had seen the cases concerning which the discussion had arisen, and
could come to no conclusion other than that they were true variola.
In the boy Levy the eruption was umbilicated and coherent; the
disease had obviously arisen from contagion, and the other stages of
the disease concurred. In the woman the preliminary symptoms
were all characteristic; there was, moreover, an eruption on the
tongue, and he believed, on the fauces. In a private patient in the
same neighbourhood there were equally conclusive indications.
There was another patient, named Taggart, whom he did not take
into consideration, as the symptoms were not well marked. But in
the case of Mrs. Smith there were preliminary fever and a well-
marked pustular eruption, and there were also several umbilicated
vesicles on the legs, which Dr. McCrea had examined and admitted
to be umbilicated. In the case of Mrs. Whatmough at Greensbo-
rough all the symptoms concurred to establish the conclusion of
variola—there was especially the distinctive smell. The child of
this woman was lying dead in the cradle. In all these six cases the
eruption commenced on the face. He had not had any of these
cases under treatment, but he had observed them sufficiently closely
to have no doubt of the disease.

Dr. Jonasson said that there could be no doubt we had had
in Melbourne recently variola, variolois, and varicella. He read a
report which he had sent to the chief medical officer in reply to the
queries forwarded to him. This was as follows:

"I have had an opportunity of seeing one of the cases which
were sent to the Royal Park Hospital, and I have no hesitation in
pronouncing this an almost typical case of varioloid or modified small-pox.

"As some medical men still doubt the existence of small-pox amongst us in any form, it will, I trust not be considered out of place if I give you an extract from a report forwarded by me to the Central Medical Board at their request.

"I saw three of the cases at the Royal Park Hospital. Two of these were so far advanced towards recovery that I do not consider myself justified in expressing a decided opinion, as to the exact nature of their original complaint, although I may mention that the face of one of these—a lad of about sixteen or seventeen—exhibited considerable pitting. The third case was that of a middle aged woman, a Mrs. Smith, who fell ill, according to her statement, on Saturday, the 16th of January, the eruption making its first appearance on the following Tuesday. I saw her, therefore, on the third day of eruption, which consisted principally of firm, hemispheroidal vesicles, of about the size of split peas, and filled with a yellowish fluid. Intermixed with these, however, especially in the face, was to be seen a considerable number of truly umbilicated pearl-coloured vesicles, each with a distinct areola. On the face, neck, and upper extremities, the pustules were crowded together in great numbers, cohering, but not confluent; they were much less numerous on the chest and abdomen, and very scanty and rudimentary on the lower extremities.

"A. I consider this case one of modified and not true small-pox, for the following reasons:—

"1. There must have been severe premonitory fever for three days, the patient stating that she had suffered during that period from coldness and shivering, followed by great heat, head-ache, light-headedness, and intense pains in the small of the back, and yet on the third day of eruption the fever had entirely subsided, and the patient declared herself perfectly free from any constitutional suffering.

"2. The eruption was preceded by a rash over the lower extremities.

"3. The pustules were advanced to a state of perfection which they would not have reached in true small-pox until the sixth day of eruption.

"4. The true umbilicated pustules, although numerous, were yet not so predominant as they would be in variola.

"5. The peculiar disagreeable odour connected with true small-pox was absent.

"B. I consider this case one of modified small-pox, and not of chicken-pox, for the following reasons:—

"1. The severe premonitory fever, which lasted for three days alone suffices, in my opinion, to exclude varicella.

"2. Characteristic umbilicated pustules were present in great numbers.
"3. Whereas chicken-pox either spares the face altogether or affects it but slightly, the pustules in this instance were more numerous on the face than on any other part of the body.

"4. Chicken-pox does not, as a general rule affect adults, but as is well-known, is a disease peculiar to childhood, whereas it appears that in the epidemic now existing amongst us, every age is equally liable to be attacked."

Other cases besides these on which he had reported had occurred, and he had reason to think they were equally conclusive. He did not think the system of isolation of much service. He relied much more certainly upon general and systematic vaccination. He referred to the more systematized practice of vaccination in Germany as compared with England, and pointed to the results as illustrative of the success of this practice. Vaccination was insisted on to such an extent as to render unvaccinated persons civilly disabled. This stringent adoption of vaccination had been strongly recommended by eminent members of the profession. He (Dr. Jonasson) thought a like stringency might be advantageously adopted here.

Dr. Macartney concurred with Dr. Jonasson in all that he had said. He disagreed with Mr. Erasmus Wilson, however, as to the identity of variola and varicella.

Dr. Hunt referred to the doubt which existed as to the identity or non-identity of the diseases. Dr. Hebra had asserted that in variola the disease lasted four weeks; in varicella, fourteen days; and in varioloid the period was said to be three weeks. He (Dr. Hunt) thought the duration of the symptoms, therefore, a very reliable test as to the particular nature of the affection. He could not see, however, any difficulty in recognising the possibility of a coincidence of the two diseases. He thought, therefore, that the facts of all these cases should be somewhat further investigated, and collated, and the result reported by a sub-committee.

Mr. Blair had seen a very marked case of varicella at Brunswick within the last few days. The eruption was pustular and umbilicated and just of a character to suggest that the two diseases were conditions of degree and not of kind. He urged that the Society should wait until Dr. M'Crea had prepared his report on the subject.

Mr. Girdlestone stated that in all the cases he had seen, the eruption did not become black, and he regarded this as a feature in the epidemic, but he did not think this negative circumstance should induce us to decide against the disease being variola.

Mr. Woolridge did not believe it was of much importance whether we established the identity or not of the two diseases, but it mattered much, seeing that we doubted variola had existed, that we should urge the stringent practice of vaccination. He had not seen the cases in question, but from what he could judge he believed them to be varioloid.

Dr. Motherwell, having been one of the Commission appointed to report upon the cases, desired to state that he could come to no
other conclusion than that they were examples of varicella. The mildness of the constitutional symptoms was such as to be quite inconsistent with true variola. As to the odour, so much insisted on, that might exist in varicella. Pitting also might and did follow upon varicella. He had not seen the cases at Greensborough, and, therefore, could not speak as to them. If, however, the disease had been variola, it was remarkable how mild it had been; and it was significant that there had been no fatal cases in Melbourne. He did not think that the present was a judicious time for vaccination, remembering what had recently been said to occur. He had heard of no well-authenticated case of genuine variola.

Mr. Gillbee concurred with Dr. Motherwell in deprecating universal indiscriminate vaccination at this time. He believed that syphilis and many other diseases might be introduced into the system. The Society, therefore, ought not to become an alarmist by countenancing indiscriminate vaccination, and especially vaccination from re-vaccinated persons.

Dr. Jonasson wished to explain, that in recommending vaccination he did not mean the indiscriminate performance of it.

Dr. Day referred to the introduction of what was considered variola at Geelong some time ago, but which was pronounced to be varicella by Dr. M'Crea. On carefully reflecting upon the matter, he had concluded that the first was umbilicated varicella, the second vesicular varicella, and the third, though umbilicated yet not varicella, inasmuch as it began on the shoulders and spread slowly to the face. A further degree, however, would he thought have constituted it variola. During the nineteen years he had lived in Geelong he had known two distinct epidemics of pustular varicella, and he thought it possible that the conditions in this colony were not favourable for the development of true variola.

Dr. McCarthy questioned the occurrence of serious symptoms from re-vaccination.

The President had seen very serious symptoms from re-vaccination.

Dr. Motherwell referred to the danger of vaccinating from a re-vaccinated person, inasmuch as the person supplying the virus might communicate serious constitutional disease.

The President thought it impossible for the Society to come to any definite opinion on the cases, inasmuch as all had not seen them. As to the means of prophylaxis, there could be no doubt that properly performed vaccination was the true protective influence, and that it rested with the authorities to perform this with due precautions. He thought it reflected very ill upon English communities that more stringent measures were not enforced, as they were in Germany and other places.

On the motion of Mr. Gillbee, seconded by Dr. Macarthy, the thanks of the Society were accorded to Dr. Thomas.
The Controversy of the Hour.

During the past month the subject of chiefest interest in the profession has been still the question of variola or varicella. The paper read by Dr. Thomas, at the meeting of the Medical Society, on the 10th instant, records concisely the history of the outbreak from its first commencement, a couple of months ago. Two cases have occurred subsequently to the reading of the paper, making in all twenty-five, of which four have proved fatal. Several of the advocates of the varicella hypothesis, however, remain firm to their first belief, and insist that the disease has been nothing more than chicken-pox, the outbreak of the disease on the arrival of the Avon Vale with genuine variola being a mere coincidence. It is not denied, however, even by them, that the form in which the cases of alleged varicella have presented themselves has been that of more than ordinary intensity, and it is assumed that varicella in its severer manifestations is very much the reverse of a harmless disease. Dr. Thomas, as will be observed, shares in the belief that variola and varicella are but degrees of the same affection, and there is, no doubt, much to be said which apparently favours this possibility. The history of varioloid disease, however, furnishes still stronger grounds for looking upon the present outbreak as a repetition, upon a smaller scale, of the epidemic of Varioloid which occurred nearly half a century ago, and which has been present at various subsequent periods. Dr. N. Chapman, formerly professor of medicine in the University of Pennsylvania, in his "Lectures on the more important Eruptive Fevers," published in 1844, gives a singularly clear account of this epidemic, and his description reads almost as if it were a narrative of the cases which have just occurred in this colony. He says, "The eruption for the most part resembled the chicken-pox in its several varieties, though in some instances it had the appearance either of the discrete or the confluent small-pox." Speaking of its appearance at Lancaster, U.S., he says, "The disease attacked indiscriminately the variolated, the vaccinated, and the unprotected, though not in the same proportions. Of the first description, or those who had previously had small-pox, there were six cases, of whom none died; of the second or vaccinated, forty,
two of whom, very young children, died in convulsions; and of the third or unprotected, three hundred and fifty, among whom there were four deaths. This slender mortality, with some other facts, led me to suspect the disease was varicella. It may be remarked particularly, in confirmation of this suspicion, that chicken-pox seems everywhere to have preceded or accompanied the more formidable epidemic.

In Baltimore, he tells us, the mortality among the unprotected was one in six. "Every degree," he says, "was presented from that of the mildest varicella to the most malignant small-pox. Generally it was of the former character. Commencing with a slight fever which endured from one to three days, the eruption appeared sometimes merely as an efflorescence, though usually as minute papulæ, many of which speedily died away, while others ran on to the formation of vesicles or pustules. The latter were of diverse shapes, conoidal, lenticular, oval, circular, flattened on the surface, with a central depression, and an imperfect areola around some of them, bearing on the whole a resemblance more or less to the vaccine or variolous pustule. Great difference existed as to the extent of the eruption, and the manner in which it came forth, in some instances confined and that very sparsely to the head, in others the whole body was covered pretty thickly, breaking out simultaneously or in successive crops, occasionally of one uniform character, or exceedingly diversified, being papular, vesicular, or pustular. Commonly all the febrile excitement subsided on the manifestation of the eruption, and, copious as this might be, it was not followed by any secondary fever. The eruption rapidly faded away. Even when consisting of pustules, these began to desiccate in two or three days, leaving their darkish scabs, which soon after fell off, leaving a smooth florid surface, with perhaps here and there a pit or indentation or a small fungoid excrescence." "Sometimes, however," Dr. Chapman continues, "it exhibited a much more formidable aspect, having every feature, in its progressive stages, of discrete or confluent small-pox, and under circumstances too of an antecedent subjection of the system to variolation or vaccination by the most skilful practitioners. Taking place without the modifying influence of these processes it was nearly always apparently variola, and generally in its most malignant typhoid shapes," thus showing that the varioloid contagion is capable of producing the true variolous disease, as was the case at Greensborough, in the instance of Mrs. Whatmough's unvaccinated child, which presented all the
specific indications of genuine variola taken from the mother, who suffered from the modified affection. The epidemic described by Dr. Chapman was marked by fluctuations during more than a score of years, but, he says, "each of its renewals has been marked by nearly the same phenomena varied chiefly by gradations of violence, and in every instance preceded by varicella, scarlatina, rubeola, as well as by an infinity of other cutaneous affections." There was presented, in fact, just such a variety of anomalous manifestations as might have been expected of a morbid principle checked in its operation by the modifying counter agency of the vaccine virus. There came about, however, just such a discussion as has lately occurred in this colony; one side urging the identity of small-pox, chicken-pox, swine-pox, horn-pox, stone-pox, water-pox, and crystalline pox, another contending that the epidemic was "really a malignant or highly aggravated state of varicella." This latter view, however, Dr. Chapman thinks "is met by insuperable objections," and he concludes that the disease was "a very altered state of small-pox." Some of Dr. Chapman's embarrassment in estimating the real character of the epidemic appears to have arisen from the difficulty he experienced in maintaining the belief, up to that time tolerably prevalent, of the complete immunity from variolous infection conferred by previous vaccination. It was urged by the varicella advocates that the epidemic must be varicella, because it attacked indiscriminately the presumably protected and the unprotected. But it is hardly necessary to remark that the experience of the last half century has very conclusively established the fact, that protection by variolation and vaccination is limited in its duration, and hence it is easy to understand how nearly the whole of the cases recently occurring in this colony have been of adults, in whom the prophylactic principle had become exhausted.

The circumstance that cases of true varicella have appeared concurrently with the present varioloid epidemic, seems to have withheld the belief, in the minds of some, of the variolous origin of the outbreak, but, as will be seen by the history given by Dr. Chapman of the epidemic of 1818, varicella was everywhere commingled with the varioloid cases; and this, though perhaps not an absolute proof of the identity of variola and varicella, is at any rate other than adverse to such a belief.
CORRESPONDENCE.

SUPPLYING VACCINE TO UNQUALIFIED PERSONS.

To the Editor of the *Australian Medical Journal*.

Sir,—I notice in this month’s issue an extract from the *Herald*, which I think, before inserting, professional courtesy might have dictated to you the advisability of referring to me for at least an explanation. Had the names of some of your contributors been implicated instead of mine, I am sure you would have taken that course. However, I wish now to state, that I am not aware of the existence of a Mrs. Crisp, that I never authorised her or any woman to perform vaccinations, and that I never gave lymph to my knowledge to any but medical practitioners duly qualified to practise.

As I seldom see the evening papers, I knew nothing of the above statement until my attention was called to it in the *Journal*.

I am, Sir, your obedient servant,

F. T. WEST FORD,
Government Vaccinator, Melb. Dis., &c., &c.

182 Collins-street east, January 24th, 1869.

LOCAL TOPICS.

The following additions to the Register were made at the last meeting of the Medical Board: William Butler, Redruth, L.R.C.S.I. 1852; Charles Duret, Melbourne, M.D. Paris 1856; Eustace Henry Lever Pratt, Clunes, M.R.C.S.E., L.S.A. Lond. 1862, M.D. St. A. 1865; Charles Cooper, Hotham, M.R.C.S.E. 1835; Henry Benjamin Hinton, East Melbourne, M.R.C.S.E. 1865. The two last were re-registrations.

The following public vaccinators have been appointed: Alfred Atkinson, M.D., at Eaglehawk, *vice* Dr. Sorley, resigned; Thomas Elms, M.R.C.S., and L.K. and Q.C.P.I., for the district of Wood’s Point; Robert Knaggs, M.R.C.S., for the district of West Melbourne; C. Stewart, L.F.P.S.G., and E. J. Wilson, M.R.C.S., additional, for the district of Richmond; Andrew Shields, M.D., for the district of Sunbury, *vice* Mr. Maxwell resigned.

A meeting of public vaccinators was held on the 15th inst., in this city, to protest against the decision of the Government not to pay for cases of re-vaccination. A deputation subsequently waited on the Chief Secretary to represent to him the importance of re-vaccination.

The Rev. Dr. Bleasdale, Mr. Crooke, M.R.C.S., and Mr. Crews, of Prahran, have been appointed members of the Central Board of Health. Dr. Youl has been informed that the salary he has hitherto received as a member of this board will be discontinued, and it has been further notified to him that he
will not for the future he required to perform the duties of visiting justice to the gaols.

The Honorary Medical Staff of the Melbourne Benevolent Asylum, namely, Dr. Neild, Dr. Fetherston, Mr. Moore, and Mr. Gray, have been re-elected for four years under the new rules of the institution.

Dr. Farrage and Mr. Rudall have been re-appointed physician and surgeon respectively of the Asylum and School for the Blind.

Mr. John McLaren has been appointed dispenser to the Melbourne Hospital.

The name of Mr. George Frederick Thomas, M.R.C.S., and late L.R.C.P.L., of this city, was on the 29th of October last struck off the list of licentiates of the College of Physicians of London for alleged unprofessional conduct. On the arrival of official information to this effect, the Medical Board of Victoria met specially and erased Mr. Thomas's qualification of L.R.C.P.L., from the Medical Register.

At the annual meeting of the Geelong Hospital, held a week or two ago a proposition was made by a Mr. A. M. Campbell that such of the patients as desired it should be treated homoeopathically. The proposition was very properly ruled out of order, but it is said that the absurdity is to be again brought forward at a special meeting of the subscribers.

Dr. Tracy, speaking of the comparatively small per centage of deaths in the Melbourne Lying in Hospital at the recent annual meeting of the subscribers, remarked:—"They had never said anything at home in reference to their hospital, and it had never been mentioned in England except by persons who had visited it, but as Dr. Maund, who was his colleague when they planned the institution twelve years before he was dead, he must say a few words to show that they had adopted a proper plan. Dr. Maund and himself said, when commencing twelve years before, that the plan condemned so strongly last year by Dr. Priestly and most other medical gentlemen, namely, the establishment of lying-in hospitals on the principle of general hospitals, by having the patients in large wards, must not be adopted in their hospital, and they would have the separate system, where not more than two or three patients would be confined in one room, or small ward. They adopted the latter plan, and had never exceeded more than two women in one room; indeed they were so loth even to have two women in one ward, that unless it was for want of accommodation they never had more than one. The patients, too, occupied three positions in the hospital, for until really ill they were kept in the principal building, and only went to the small ward, or room, when they were so; after which, in about a week, they returned to the main building again. Had the results he had mentioned been stated previously, and sent home with the statistics of the low rate of mortality for two or three years, it would have been said, 'Oh, you have had a run of luck, we have had good luck occasionally too;' therefore the honorary medical officers had waited; but now they considered the subscribers might congratulate themselves inasmuch as the institution had been established twelve years, and, although there had been 3421 cases of accouchement in the hospital, only 41 deaths had occurred, leaving the small average of deaths of .012 per cent. They could not hope for any better result in the very best private practice; indeed, any medical practitioner would be very fortunate if he had not a larger per-centage."
At the weekly meeting of the Melbourne Hospital Committee, on the 26th ult., a report was read from the honorary medical staff on the subject of a letter referred to them from Professor Halford, relative to the appointment of a pathologist to the hospital. The document recommended the creation of the office and the erection of a room for the use of the pathologist, also the purchase of the necessary appliances. The chairman pointed out that before the committee went to any expense they ought, in his opinion, to have an assurance from Professor Halford that he would carry on his operations for two or three years at least without pecuniary remuneration from the committee. If after some time, the committee having expended a pretty large sum of money, Professor Halford thought fit to discontinue his observations on subjects at the hospital, the committee would be placed in a very unpleasant position. The matter was ultimately postponed for further consideration for a month.

On the 5th inst., a testimonial was presented at Menzies' Hotel, in this city, to Mr. H. B. Wilson, M.R.C.S., late of Wahgunyah, from the residents of Wahgunyah, Corowa and Rutherford, on the occasion of his leaving the district and coming to practise in Melbourne. The testimonial consisted of an illuminated address and a silver tea-service, and was presented by Mr. Daniels, manager of the Bank of Victoria, Wahgunyah.

We have received from Mr. Wormald, of Madelinestreet, a sample of carbolic acid soap. Mr. Wormald does not state the quantity of acid contained in the preparation, but it is to be presumed the dilution has been made to the required degree. The extensive use of carbolic acid as an antiseptic has naturally enough suggested its employment in the convenient form of soap, and so far as we have been able to judge of the specimen sent by Mr. Wormald, it will serve very well the purposes for which it is required. It certainly combines very successfully the requisites of the toilet with the qualities of a medicated preparation.

An inquest was lately held by Dr. Youl on the body of a Chinaman, aged 30 years, who had gone to his bed immediately after supping on macaroni, and who had died during the night with symptoms of asphyxia. The autopsy showed the stomach enormously distended with partially cooked macaroni, the swelling of which had so far interfered with respiration and circulation as to occasion death.

The Legislative Assembly of New South Wales was recently engaged in discussing a proposition to grant a pension of £300 per annum to the widow of the late Dr. Bland of Sydney. The motion was rejected by a majority of three, there being fifteen in favour and eighteen against.

Messrs. Negus and Co., of this city, have applied to the Lands Department for a lease of 820 acres of swamp land in the neighbourhood of Dandenong, for the purpose of breeding leeches. Twelve acres only have been granted. Messrs. Negus propose to stock the breeding ponds with leeches from the Murray, and calculate that in three years they will be able to supply any quantity.

A public dispensary has been established in East Collingwood, under the auspices of the City and Suburban Mission. Dr. Singleton has given his services as physician and, as we understand, supplies the medicines also gratuitously.
Attention appears to be at last prominently directed to the extensive pollution of the river Yarra which, despite legislative prohibition, is rapidly becoming a common sewer for all the districts through which it passes. The Angler’s Protection Society has taken up the subject with praiseworthy warmth, and Mr. Alves, the secretary of the society, has ascertained that among other impurities a fellmonger’s establishment discharges three times a week into the river the contents of four vats, each holding from six to seven thousand gallons of a strong solution of arsenic. The fish are all dying, and a number of delicate plants at the Botanical Gardens which have been watered from the Yarra have been killed. When it is remembered that the Yarra is the source of our water-supply, failing the Yan Yean, the consequences of such a contingency are not difficult to be imagined.

The Medical Association of Victoria met at the Port Phillip Club Hotel on Friday evening, the 12th inst. There were present: Mr. C. Stewart (in the chair), Dr. Berncastle, Mr. Lloyd, Mr. Moore, Dr. McCarthy, Mr. Bowie, Mr. Crooke, Mr. Bragge, Mr. Iffla, Dr. Reeves, and Mr. Nalty. Papers were read by Dr. Berncastle on snake-bite, by Dr. McCarthy on small-pox, and by Mr. Moore on re-vaccination.

NOTICES TO CORRESPONDENTS.

Communications have been received from the following gentlemen: Dr. Pitman, Registrar of the Royal College of Physicians, London, Dr. Tracy, Mr. Ford, Dr. Wigg, Dr. Jonasson, Mr. MacGillivray, and Mr. Wormald.

The following publications have been received: “The Lancet,” for October 31, November 14, 28; “Medical Press and Circular,” for November 4, 11, 25; The “St Louis Medical Reporter,” for October 15 and November 1; Trübner’s “American and Oriental Literary Record,” for October 31; Robertson’s “Monthly Book Circular,” Nos. XCV. and XCVI.; The “Australian Medical Gazette,” for January 30.

Dr. Wigg’s wish with regard to the journal represents a very general feeling in the profession, and if every member of it in Victoria would give a like practical expression to his desire the change could readily be effected.

BIRTH.

SHIELDS.—On the 8th inst., at Sunbury, the wife of Andrew Shields, M.D., of a son.

DEATHS.

HEISE.—On the 24th January, at Ballarat, Mabel Maud Ellen, infant daughter of William Heise, M.B., and M.R.C.S. Aged nine months.


WILSON.—On the 10th February, Kate Alice, twin daughter of E. J. Wilson, M.R.C.S., Bridge-road, Richmond. Aged six years.

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