Thus the Lake of Geneva in May, the lower stations in June, the higher ones in July and August, constitute a delightful ladder, ascending and descending, from spring to autumn. To the weak, to the really convalescent, to townspeople overworked, such a mode of passing the summer appears to offer every element of benefit; but I question whether it is an improvement on the health resorts of the British Isles or of the French northern coasts to consumptives, to those who are suffering from chronic bronchitis or asthma. The nights are often cold; there are occasional clouds, which mean a damp fog penetrating anywhere, often severe rain. On ascending to Les Avants and to Morgins, I had to pass through one of these fog-clouds, breathing damp cold air, which roused all my old chest-pains for hours after I had passed through it. Moreover, being all on the sides of mountains, there is not such a thing as a really good level walk.

My own impression is that the comparative immunity from phthisis which the inhabitants of mountain regions undoubtedly enjoy is not so much the result of some mysterious influence on the human economy of mountain air as of the sparsity of the population and of their hygienic out-door life.

In all mountain regions, high and low, there are occasional outbursts of bad weather, even in July and August, which are of but little consequence to ordinary invalids, but may seriously damage chest-invalids living in such regions. This I have just experienced. I left La Rossinière for Fribourg, two thousand feet lower down, on the afternoon of the 2nd July. It began soon after to rain, and rained without intermission for thirty-six hours until the morning after reaching Lucerne on the 4th. All the way, the higher mountains were enveloped in cloud and invisible. So it was when I looked out early at Lucerne, although the rain had ceased. By ten o'clock, these clouds had melted, and then I saw all the mountains that surround the lake of the four Cantons covered with a deep coating of snow. The Righi had a layer of snow six inches deep, some distance below the hotels, apparently half-way down. Mont Pilat was half covered with snow. It was bitterly cold; 58 deg. only at mid-day and all day. No doubt all the mountain pensions above four thousand feet were enveloped with snow. I may judge of the effect on invalids of such an outburst by its effect on myself, who am now quite well. It checked suddenly the biliary secretion of the liver and brought on congestion and a bilious attack; whilst the upper air-passages were also irritable and slightly inflamed. Indeed, I have been nursing and doctoring myself ever since.

There is a class of sufferers, however, to whom I feel very sympathetic, and to whom I cordially recommend these mountain stations. It is my overworked, overstrained, fellow practitioners. Three weeks spent at Morgins, Villard, or Les Diablerets, amongst the fir-forests and the mountain peaks and glaciers, would do them a world of good, and be a source of immense satisfaction. Moreover, the expense would not be great; a Cook's return ticket to Geneva and two guineas a-week at a mountain pension, would all but cover the expenses, with a small margin for guides and unforeseen expenses. I sincerely trust, for their own sake, that some scores will take my advice, and depart to wield the alpenstock in the Alpine regions I now open out to them.

THE DIAGNOSIS OF MALIGNANT TUMOURS OF THE OVARY AND MALIGNANT PERITONITIS.

By J. KNOWSLEY THORNTON, M.B., C.M.,
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IN the BRITISH MEDICAL JOURNAL, July 20th, 1878, Dr. Foulis of Edinburgh has written on the above subject, taking as his text certain remarks made by Mr. Spencer Wells in his second lecture on the Diagnosis and Surgical Treatment of Abdominal Tumours. Dr. Foulis quotes at length from a paper of his own, published in the JOURNAL, June 25th, 1875, and also from a paper of mine published in the *Medical Times and Gazette*, April 10th, 1875; his object apparently being to prove that Mr. Wells was wrong in giving me credit instead of Dr. Foulis, as having added to the knowledge of the profession in this matter. Questions of priority of this kind are, it seems to me, matters of little moment; and I should not have taken up Dr. Foulis's challenge, had I not known that Mr. Wells was possessed of information as to my work in this matter which justified him in saying what he did, though I had not published any paper on the subject at the time when Dr. Foulis published his first observations in the *Edinburgh Medical Journal*, March 1875.

In December 1874, Mr. Wells operated on a lady who had been previously tapped more than once. I had on each occasion examined the fluid which was drawn from the peritoneum, and had directed Mr.

Wells's attention to the cell-groups found in the sediment, and expressed an opinion that they indicated rupture of an ovarian cyst containing papillomata, which had infected the peritoneum. I founded this opinion on previous observations in other cases, and especially on those made in a case of my own, in which I had made an exploratory incision after tapping the peritoneum. This operation was performed on September 14th, 1874: the same month in which the attention of Dr. Foulis seems first to have been directed to the subject. Our positions at this time were similar—Dr. Foulis having the privilege of examining the fluids obtained by tapping in the cases of Dr. Keith, while I examined those of Mr. Spencer Wells. The only marvel to me is that, among the many workers in this field, no one had sooner called attention to these cell-groups, as they are so very remarkable and different from anything else found in the sediments of cystic and ascitic fluids.

The following quotation from a paper which I read before the Harveian Society, April 20th, 1876, will show that I have no wish to claim priority in the publication of an observation which we both made independently at the same time.

"It is very different, however, when we come to examine peritoneal fluids, for here we find the most remarkable and characteristic cells and cell-groups. I have not had many opportunities of examining ordinary ascitic fluids in cases of hepatic, cardiac, or renal disease; but in the few I have examined I have never found anything but a few red and white blood-cells, and a few larger granular nucleated cells, having the appearances one would expect to find in chance free cells from the endothelium lining the peritoneal cavity. It is when we come to examine peritoneal fluids which have been poured out round an abdominal tumour, however, that we find various groups of cells, which it is impossible for me to describe in detail here. Suffice it to say that I believe they are of the utmost importance for us to study, and often furnish most valuable aid in diagnosis. I send round drawings of some which will, I feel sure, do more than any lengthy description towards convincing the members of the Society that they are sufficiently characteristic. My friend Dr. Foulis of Edinburgh claims to have been the first to describe some of these,* which he considers to afford certain evidence of the malignant nature of the tumour if it be ovarian. I will not dispute with him the satisfaction of being the first to draw attention to this important subject; but I cannot quite agree with him as to their always indicating malignancy when present with an ovarian tumour, as I have found them in the peritoneum when irritated by rupture of an ordinary ovarian cyst, and Dr. Keith tells me he has operated on patients with the nodular growths (from which, I believe, these cell-groups are shed) covering the peritoneal surfaces, and yet the patients have remained for years after in the enjoyment of good health. I have also found them with malignant disease of the uterus, liver, and omentum. I believe these groups to be of two kinds: the one consisting of masses of germinating endothelium; the other of masses of germinating or proliferating cells, derived not from the endothelium, but from the ground-substance of the peritoneum. Various forms will be seen depicted faithfully in the drawings, some looking like mere clusters of lymph-corpuscles (like bunches of grapes), others like more or less flattened endothelial plates arranged in layers, and others presenting every variety of size and shape, and every stage of growth. It is these latter to which I attach the most importance as indicating malignant disease; and under this term I include both the rapidly growing sarcomata and carcinomata and certain peculiar ovarian papillomata. I have great hopes that careful study will enable us to diagnose by these groups not only the presence of malignant as differing from simple tumours, but also the special forms of tumour. I would say here that I believe the presence of any large collection of ascitic fluid round an abdominal tumour is always strongly suggestive of malignancy; but whether its presence is merely due to irritation of the peritoneum by rapid growth, or to some more direct infection, I think is at present uncertain. The occasional presence of a considerable quantity of ascitic fluid, along with a simple uterine fibroid or simple ovarian tumour, points to the former hypothesis as correct; and the presence of the groups of cells I have been speaking of, along with ascites in malignant disease, and their absence in simple ascitic fluids, also favours this view. The colouring of the ascitic fluid with blood, along with these cell-groups, I believe, is a certain indication of malignancy; though, even where this symptom is also present, we see very different degrees of malignancy, as judged by the time the patients may live in tolerable comfort if occasionally relieved by tapping."

* It is only just that I should say my statement of Dr. Foulis's views is taken from the August number of the *Edinburgh Medical Journal*, 1875, pp. 169-70. It will be seen that I am also able to answer Dr. Foulis's query, as to whether the cell-groups are ever found in ascitic fluid due to the presence of malignant tumour of other organs besides the ovary.

A comparison of this paragraph from my paper with the last written statement of the views of Dr. Foulis (July 20th) will show that our observations were still similar, and leading us to like conclusions. Since I wrote in 1876, however, I have had very many more opportunities of studying the subject, and I now no longer find myself agreeing so closely with Dr. Foulis, and I have been forced to modify some of my own published opinions. Dr. Foulis still thinks that simple prolonged irritation, as from an innocent tumour, may cause these sarcomatous growths from the peritoneum, and compares them with the well-known drawings of Dr. Klein. I, on the contrary, am quite certain that the growths produced by this mere irritation, as apart from cell-infection, are of a different nature, and can be distinguished by microscopic examination; and I have been much struck by the fact that, while in the animals on which Dr. Klein experimented mere irritation produced these growths, in the human female something more is required. The growths produced by mere irritation are very similar when seen with the unaided eye, but when examined microscopically they are at once seen to be composed of masses of lymph-cells, all much of a size, and not presenting the large multiple nuclei and strange vacuolation processes which are so characteristic in the malignant growths. In fact, they are just as distinct microscopically as are sections of scirrhus of the breast and of chronic inflammatory induration. Doubtless, as our experience is increased, we shall find that it is the confounding of the innocent inflammatory growths with the malignant growths which has led to the apparent uncertainty of the behaviour of cases in which ovariectomy has been performed.

I have written at some length on Peritoneal Infection in a paper published in vol. xxviii of the *Transactions of the Pathological Society of London*, p. 189, and I have there frankly acknowledged the difficulties of the subject, and left open many points for decision when carefully observed cases are more plentiful than they are at present.

Dr. Foulis has quoted from a paper which I published in the *Medical Times and Gazette*, April 10th, 1875; but he has omitted to quote the parts which must convince anyone who reads it that I was, while writing it, quite conversant with the subject of peritoneal infection from malignant ovarian cysts. The following is the passage to which I refer.

"These seem to grow slowly; and, so long as they are confined to the cyst-cavity, appear quite harmless; but cysts containing them are very prone to rupture, the first result of such rupture being a troublesome ascites from constant effusion into the peritoneum of ovarian fluid, and its consequences already mentioned; and when once they grow free in the peritoneal cavity, they assume a clinically malignant aspect, partly from the readiness with which they contract adhesions, rendering the removal of the tumour difficult or impossible, but more especially by an actual spreading of the growths over the peritoneum, the proliferating cells rubbed off in the movements of the patient either taking fresh root or, as my observations lead me to think, causing fresh growths at points where they settle by a process of auto-inoculation. It is even doubtful whether in time distant organs may not become affected, as in cases of true cancer."

There is one other part of Dr. Foulis's recent paper in which he refers to my statement as to the frequency of these growths in ovarian tumours. He says: "I suppose Mr. Thornton means he has examined the fluid removed by tapping from more than one hundred tumours, and has detected the growth only a few times."

Dr. Foulis has no right to suppose this; I meant what I said, that I had carefully examined more than one hundred tumours. The fluids I had examined were even then more numerous, and not a week passes in which I do not examine several fresh specimens. I do not often examine the lining membranes of the cysts now; but I have examined quite enough to make me certain that the form of papilloma which gives rise to infection is comparatively rare, and when it is found it is commonly found in every cyst in the tumour, and often fungating through from one cyst to another, or on to the external surface.

I still maintain that the finding of the cell-groups in the cyst-fluid is the all-important point, as by prompt operation and care in performing it we may hope to prevent infection of adhesions or peritoneum. And I have seen more than one case giving thoroughly convincing proof of the "practical value" of the discovery of these cell-groups while still confined to the cyst, and of the danger of neglecting to act on the warning given by their discovery.

Dr. Foulis still attaches importance to the bloody or port-wine colour of the ascitic fluid. I have for some time ceased to do so, as at successive tapplings of the same cases I have found the peritoneal fluid of a port-wine colour, and then of a perfectly clear straw colour; and the latter has contained just as many rankly growing cell-groups as the former.

I have lately, in several cases, made an observation which is, I think,

of value in enabling us to give a more hopeful prognosis as to length of life with tapping. These cell-groups have a tendency in certain cases to develop cartilage and bone; sometimes the papillomata on the peritoneum become capped with a thin layer of ossifying cartilage. This seems to be an attempt made by nature to check the growth of the disease; and I have now under my care a woman with a large solid ovarian tumour, whose peritoneum I tapped every few weeks for two years; then this change in the cell-groups appeared, and along with it a cessation of the formation of ascitic fluid; and now for several months I have not tapped her, and she has gained strength and flesh. The disease, in fact, seems to be dormant; whether it will remain so, time alone will show.

The cartilage seems to be first formed in the vacuoles instead of the mucin or colloid they generally contain. I have long regarded the cells as the active secreting agents in forming the fluid, the process being similar to that described by Creighton as happening when milk is secreted in the breast.

I think it not impossible that a similar bony growth may result from the altered nutrition after the removal of the mother tumour by ovariectomy, and may account for the absence of further symptoms of malignant disease in some cases.

Dr. Foulis says: "We must not pay too much attention to the presence of little masses of proliferating epithelium within the cysts; it is when they are formed in ascitic fluid surrounding ovarian tumours that they become objects of the greatest importance." I regard this as a dangerous and misleading statement; and, to use the old homely saying, he might just as well tell us "to lock the stable door after the horse is stolen".

The fact that solid ovarian tumours are usually malignant is well-known, and I have alluded to it in the paper already referred to in the *Transactions of the Pathological Society*. The early infection in these cases is, I believe, due to the solid malignant masses rubbing against neighbouring peritoneal surfaces, and thus bringing about cell-infection. Reading over the cases operated on by Mr. Wells, Dr. Keith, and Dr. Atlee, would not lead me to agree with Dr. Foulis as to "so-called ovarian cancer" being common; nor would my own experience, now extending to six or seven hundred cases of abdominal tumour. I think, considering the number of ovariectomies performed and published by the leading operators, cancerous or malignant tumours of the ovary are remarkably rare, and the cases of recurrence after operation still more so. Compare the ovary and breast in this respect.

Dr. Foulis speaks of "little masses of proliferating epithelium settling down everywhere on the peritoneal surface *taking root*" (the italics are mine), "and give rise to little nodules of sarcomatous growth". This relation of "proliferating epithelium" and "sarcomatous growths" is a confusion of terms which is, I think, unfortunate with the present generally accepted pathology of the epithelial and connective tissue groups of tumours. It is, of course, admissible if we accept the view of Dr. Foulis, that in the ovary epithelium (that of the *membrana granulosa*) is formed from the connective tissue corpuscles of the stroma of the organ; the change in the first instance being a direct one, the connective tissue corpuscle becoming an epithelial cell, and then by division producing other epithelial cells.

I have long worked at the histology of the ovary, but have failed altogether to find the transition described by Dr. Foulis in his paper on the Development of the Ova and the Structure of the Ovary. I am quite familiar with the connective tissue corpuscles he figures, and also with the cells surrounding the young ova, but I have failed to find the cells which tell me the one changes into the other, just as I maintain Dr. Foulis has failed to figure the transition-states in the beautiful drawings with which he has enriched his paper.

I shall continue to work at this subject, and I hope Dr. Foulis will do the same, and in the end I do not doubt that we shall be able to find a firm common foundation without being too anxious to inquire who put in this brick, and who that. I much fear, however, that, until eminent histologists are more agreed as to the processes of cell-growth in the epithelial and connective tissue structures in the normal state, there is not much hope of certain and enduring work in pathological histology.

The following quotation shows my position after four years' work with ample material. It is from the paper in the *Pathological Transactions* to which I have already referred, and I think I remain much in the same state of doubt at the end of five years' work, though some valuable additions to my knowledge of this most interesting subject have been made in the last twelve months.

"Two theories as to the production of these growths seem to me to claim our attention. 1. Do the cells or little buds which escape from the ovarian cyst actually take root and grow on the peritoneum? 2. Do the cells or buds, when remaining long enough in contact with the

peritoneal surface, impart to its endothelial or subendothelial connective tissue cells a capability of producing growths similar to themselves? It seems to me that the whole question of the methods of recurrence and infection in malignant disease is too little understood for us to give a positive answer as to which of these theories is the correct one. But, looking to what we have learnt from skin-grafting and from the researches of Creighton and others on cancer, I think the second theory seems the most probable one."

REMARKS ON PSORIASIS.

By JAMES CUMMING, M.D., F.R.C.P. Edin.,

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Synonyms: Lepra alphas; Psora; Schuppenflechte (*ψώρα*, the itch). *Varieties:* Psoriasis annulata; circinata (clearing away in the centre like tinea circinata); diffusa or inveterata (in large patches); guttata; gyrata (curved lines extending from the periphery); nummularis (discoid, like a coin); orbicularis (enlarging in the periphery); palmaris et plantaris (almost invariably syphilitic); punctata; and, lastly, psoriasis universalis. Celsus has a paragraph, after Impetigo, in which he very briefly describes what is believed to correspond as nearly as possible to psoriasis: "Alterum genus pejus est, simile papulæ fere, sed asperius rubicundiusque, figuras varias habens: squamulæ ex summa cute discedunt, rosio major est, celerius et latius procedit, certioribusque etiamnum, quam prior, temporibus et fit, et desinit. Rubra cognominatur." (A. Corn. Celsi *De Medicinâ*, lib. v.)

Seat.—It has an affinity for the extensor surfaces, such as the elbows, hips, and knees, but may affect the whole body.

Etiology.—Psoriasis is common to all ranks of society, and may appear at any period of life from childhood to old age, but never occurs in infancy. Those in robust health, the anæmic, plethoric, and even those debilitated by disease, are all liable. There appears to be a predisposition to it in certain individuals; and it is generally believed to be hereditary, although a generation may be passed over. Of predisposing causes may be mentioned those of a gouty and rheumatic diathesis; those of a nervous and sanguine temperament; chlorosis; gestation; over-lactation; rachitis; tuberculosis; struma; dyspepsia caused by eating indigestible articles of food; wine; menstrual disorders; certain trades, as bakers, masons, etc. But much of this we must receive with reserve. It is usually more severe and more apt to recur in winter. It is not contagious, and cannot be communicated either by inoculation or lactation. True psoriasis is quite distinct and distinguishable from the syphilitic form. Gaskoin (*On Psoriasis or Lepra*, 1875) remarked that a large percentage suffered from asthma.

Differential Diagnosis.—We may classify the following skin-diseases* as most likely to be mistaken for psoriasis: eczema squamosum; lichen exsudativus ruber; lupus erythematosus; lupus exfoliatus; pityriasis rubra; seborrhœa; syphiloderma squamosum; and lichen circinata.

Pathology.—The masses of scales, composed of epidermic cells, are situated upon an hyperæmic cutis (Simon, *Die Hautkrankheiten durch anatomische Untersuchungen erläutert*). Neumann (*Lehrbuch der Hautkrankheiten*) found, as the result of careful microscopical investigation, an increase in the cells of the stratum corneum; marked development of the rete Malpighii; enlargement of the papillæ, with numerous cells, often stellate, surrounding the capillaries, particularly in the superficial layer of the corium. There is, in addition, an increase of the fibrillar connective tissue. Wertheim observed that the papillæ are considerably enlarged, and the vessels distended and tortuous, impeding the circulation, thus accounting for the sharply defined margins of the patches. Hebra (*Lehrbuch der Hautkrankheiten*) noted that the characteristic appearances are almost obliterated after death, that the red base on which are situated the masses of scales loses its colour, and that the latter adhere but loosely. A microscopical examination reveals no change. To sum up the pathology, psoriasis is an affection of the superficial layer of the corium, with increased cell-proliferation and enlargement of the papillæ.

Treatment.—There is, perhaps, no skin-disease which has received a greater variety of remedies and so-called specifics than psoriasis. The ancients believed in the Hura Braziliensis, and bled *usque ad deliquium*. Galen recommended the flesh of vipers; Pliny, tar applications; Dioscorides, veratrum album with vinegar, subacetate of copper, and cantharides. Oribasius had faith in a mixture of lime and water; and Paulus Ægineta prescribed preparations of the ranunculacæ, delphi-

nium staphisagria, unguentum terebinthinæ et resinæ, sulphur, roots of the liliacæ mixed with honey.

Let us first take the internal treatment. Arsenic has long and justly held a prominent place in the therapeutics of this disease. It has been prescribed in various forms, such as liquor potassæ arsenitis, liquor sodæ arseniatis, the Asiatic pills (composed of arsenic, gum Arabic, and pepper), and pills of arsenic and opium, useful in diarrhoea. In whatever form it is ordered, it should be well diluted, taken after meals, and persevered with. Its effects must be carefully watched, and ought to be discontinued when toxic and unpleasant symptoms supervene, as hyperæmia, heat and redness of the fauces, nausea, pains in the stomach, dyspepsia, watering of the eyes, and congestion of the conjunctivæ. Lipp of Gratz (*Archiv für Dermatologie*) injected arsenic hypodermically with good results. Cathartic drugs, by lowering the general nutrition, have caused the patches to fade away, only to reappear as soon as the normal standard of health has been restored. Carboic acid, in the form of a pill (one to five grains), has also proved of good service, and has even been lauded by some as a specific. It may, like arsenic, occasion disagreeable symptoms, such as fever, vomiting, headache; and darkens the fæces and urine. Alkalies, in the form of magnesia and Rochelle salts, balsam of copaiba, phosphorus, colchicum in those of a gouty diathesis, cod-liver oil and iron in the strumous and those debilitated by over-lactation, and mercury in the syphilitic, have all been tried; tinctura lyttæ, but it almost invariably causes symptoms of strangury. The waters and baths of Aix-la-Chapelle, Baden (near Vienna), Barèges, Carlsbad, Harrogate, Kissingen, Louèche (Switzerland), Pillnau, Ragatz, Saratoga, and Vichy, have all had their numerous supporters.

Diet.—The diet should be bland, unirritating; *i. e.*, vegetable and fatty chiefly, with light French wines. Highly spiced dishes should be avoided. Some speak favourably of a strict vegetable regimen, while others—as, for instance, Passavant (*Archiv für Heilkunde*)—recommend an exclusive animal diet.

External Treatment.—The external applications in this affection have likewise been multifarious. We may merely record a few: oleum rusci (from betula alba); oleum coniferi; oleum fagi; unguentum picis; unguentum creasoti; unguentum hydrargyri (watching symptoms); unguentum sulphuris iodidi; unguentum hydrargyri ammoniati; etc. Good results have been obtained from the use of sulphuret of calcium, applied to small surfaces at a time, as it is rather painful (recommended by Vlemingx for scabies). Professor Hebra has strongly advocated an alkaline application termed the "spiritus saponis alkalinus", consisting of potash soap (grüne Seife, sapon kalinus or sapon viridis), dissolved in alcohol and scented with spirits of lavender. R. Saponis viridis ʒij; spir. vini rect. ʒi. Filtra et adde spir. lavandulæ ʒij. Solve. This should be well rubbed in, and allowed to remain in contact with the skin for several days; the patient using unchanged linen and bedclothes, followed subsequently by a bath. Sulphur mineral baths are useful in removing the scales. The inunction of olive-oil is grateful in inflammatory cases. Water-dressing, in the form of strips of lint soaked in warm water and covered by gutta percha, has been followed in some cases by fair success. Alkaline and vapour baths assist in removing the scales; also the "pack", undergone twice in the twenty-four hours (hence, doubtless, the credit given to the treatment obtained from a sojourn in a hydropathic establishment, where, in addition, and by no means the least important part, the diet is simple, nutritious, and non-stimulating). The various tar-preparations, such as carboic acid dissolved in olive-oil, have long been popular. Such lotions or ointments should be thoroughly rubbed in with a brush, having previously, as far as possible, removed the scales. Tar, however, has its drawbacks, as, besides occasioning unpleasant internal symptoms, it often creates an irritating form of acne. All external applications should be well rubbed in; and, whatever the form of treatment adopted, it should be persevered with, warning the patient of the exceedingly chronic and obstinate nature of the disease.

CASE.—Mrs. F. brought her daughter, a child twelve years of age, to me on January 2nd, 1876, stating that the latter had been for some time troubled with a scaly eruption.

History.—This commenced about three years previously. I could obtain no history of gout or rheumatism, and, to the best of the mother's recollection, none of her own or her husband's family had been similarly affected. On examination, the legs, arms, and hips were found to be covered with large scaly patches (psoriasis diffusa) some two and three inches square. The child had not been in good health, and complained of an impaired appetite.

Treatment.—The following lotion was ordered to be thoroughly rubbed in with a sponge, and the affected parts to be kept constantly moist, overlapping the dressing with gutta percha: R. Acidi carbolici ʒ iss; olei olivæ ʒiv. Solve. This was ordered to be followed in the