believed to support the infective theory, and the remainder were doubtful or negative.

I propose to criticise with some minuteness Dr. Hermann Weber's cases of supposed transmission from husband to wife. I do this because they are the most fully reported cases with which I am acquainted, and because they are not unfrequently quoted by the complete believers in communicability as providing almost all that is to be desired in the way of evidence in favour of their views. The cases are nine in number, and are reported in the Transactions of the Clinical Society for 1874, though they seem to have occurred some years previous to that time. The husband is in every instance described as of consumptive family; they all (the husbands) suffered from hæmoptysis between their eighteenth and twenty-first years; and they all survived, save one, a second marriage at least; and one survived a fourth, and another a third. The marriages, too, were not repeated with absolutely indecent haste, consequently the husbands survived for some considerable period in each case the first marriage, in which they are supposed to have transmitted phthisis to their partners. They are all described as healthy, or considered so, at the time of marriage; and they all, save one, died of phthisis, as stated by their medical attendants or as ascertained by post-mortem examination. Amongst the many remarkable points in these cases, the most noteworthy to me is the period of time which elapsed between the supposed infection of the first wife, when of course the husband was regarded as suffering from phthisis, and his death. In Case 1 the period I have calculated from the facts given was at least twenty-five years, in Case 3 nine years, in Case 4 twelve, in Case 6 eight, in Case 7 eight, and in Case 8 ten; in the remaining cases no definite figures are given, but calculating from the number of pregnancies of the wives and other statements it may be roughly stated at from five to nine years. The man in Case 9 married his first wife in 1867, his second in 1868, and was living and well in 1872. To return to Case 1. A man said to be of marked phthisical family, to have had hæmoptysis at twenty-one, and to have infected four successive wives with consumption, lived through twenty-five years to tell the tale. Can this seriously be taken as an example of infection from husband to wife? Suppose him to have been perfectly well, as stated, at twenty-seven, when he married his first wife, who showed symptoms of phthisis after the third pregnancy—that is, four years after marriage at the earliest,—and take this as the commencement of his own disease; after an interval of ten years he marries his second wife, whom he infects; the intervals between the second and third and third and fourth are not given, but say the time allowed to elapse between the death of one wife and the marriage of another was twelve months; this, added to the time which each wife lived, will give us a period of not less than seven years, during which period he must have been exhaling the contagium of phthisis, or, in other words, have been suffering from active lung disease, and then survived the last of his supposed victims for eleven years, when he died and presented the following changes in the lungs: “a cicatrised condition of the former seat of disease, and also the recent affection.” I confess I do not see my way to accepting in any sense this case as proof of direct infection from husband to wife; rather it is to me a more than gratifying example of the curability of phthisis, and a proof that a man may cohabit with four individuals dying of consumption, who is himself of consumptive extraction, who has exhibited lung symptoms from his twenty-first to his twenty-fifth year, and lives to the not unripe age of fifty-seven, having expressed some doubts as to the propriety of even a fifth marriage.

This line of criticism, which I deem not unfair, may be applied with the same result to all Dr. Weber's cases. They prove too much, not only of contagion, but of recovery from what we regard as a commonly lethal condition. The cases published in abstract in the Collective Investigation Record scarcely admit of analysis, the statements being in so many cases simply the conclusions of the reporters, and not the facts upon which the conclusions are based. In Dr. Weber's cases, and also in the collective investigation cases, I beg you to notice the entire absence of cases of acute general tuberculosis, of tubercular meningitis, strumous arthritis, and of urino-genital tuberculosis, all of which diseases are to be accounted manifestations of tubercular affection in the human subject, and cases of which we have a right to expect if the theory be true as applied to man in these so-called examples of infection.

To proceed further with the negative side of the question. I need scarcely refer to the very striking statistics of

the Brompton Hospital in regard to the affection of attendants resident in the hospital. During the last twenty-five years not a single case of phthisis fairly traceable to the surroundings could be found amongst more than 250 officials connected with the hospital during that time. The mortality, in fact, amongst residents was lower than in some general hospitals. It has been said that this proves only that under such conditions as exist at Brompton phthisis is not contagious, and that it cannot be taken as in any degree settling the whole question. But, I would ask, do the conditions at Brompton differ in kind or even in degree from the condition under which life will go on amongst us? The element for contagion has been shown to exist in the atmosphere of the building generally, and Dr. Charnley Smith has shown also that the bacillus is continually escaping from the air-passages of phthisical patients.

My own conclusions upon this extremely wide and difficult question are, I need scarcely say, subject to revision. In the main they are as follows:—1. The tubercle bacillus is constantly found in all lesions of a tubercular nature, and in all cases of pulmonary phthisis in the human subject. 2. So far as the communicability of tuberculosis in animals is concerned, this is clearly proved by inoculation experiments. Whether it is so without antecedent traumatism there is very little evidence to show. 3. The great prevalence of phthisis amongst those of certain occupations, and the comparative rarity with which those presenting caseous changes in the lungs die by means of a general infection, tend to show that certain predisposing causes are necessary for the production of phthisis—some more definite condition than a mere obliquity of construction, such as we mean by constitutional tendency. The bacillus is not in this case the real and primary cause of the disease, but by its constant presence may determine a wide distribution of the lesion and a fatal result. 4. Although the discovery and isolation of Koch's bacillus and the inoculation experiments upon animals make the direct infection of individuals with tuberculous matter possible under certain conditions, these conditions are not established by our present mode of life. 5. The clinical evidence of direct infection from man to man is at present of a quite untrustworthy nature. I need scarcely add that the want of proof of direct contagion in no way militates against the view that pulmonary phthisis is an infectious disorder—that is, due to the introduction of an infective particle from without.

SOME STATISTICS AND OBSERVATIONS REGARD- ING LITHOTOMY IN THE HYDERABAD CIVIL HOSPITAL, SINDH.

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TABLE I. is a summary taken from the monthly returns of the above hospital of the operations for lithotomy performed by myself from the 1st January, 1883, to the 31st August, 1883, a period of eight months. It gives the number of cases, with the ages, results of the operation, &c. The patients were all in good health, with the exception of the symptoms arising from stone in the bladder. Of the 102 cases operated upon, 81 were Mussulmans and 21 were Hindoos, of whom 98 were males and 4 were females. To avoid taking up too much space, I have been obliged to arrange their ages into quinquennial periods. The table will show that Sindhees are infinitely better subjects for operation than Europeans, being so much less liable to inflammation setting in after the operation, owing probably to the simple manner in which they live, and perhaps to the very dry climate of Hyderabad. The operations at the other hospitals in Sindh, though fewer, have reached to pretty nearly about the same favourable results; consequently lithotomy here in Sindh is not looked upon as a formidable procedure, as is the case in Europe, owing to the mortality being comparatively so very low. The table will also show the average number of days spent in hospital, as well as the average duration of the formation of calculi, arranged in quinquennial periods, to correspond with the ages of persons

operated upon; the weights of the stones are arranged in the same manner for the purpose of condensing information.

It will be seen from the statistics that stone in this country is more prevalent in children from one to ten, and in adults from thirty-one to fifty, years of age than at any other time of life; during this latter period of life also calculi are larger, taking the average; this is remarkable, but is nevertheless the case. My object in publishing these statistics is to point out the superiority of lithotomy as an operation over that of lithotripsy, and also to show a cursory outline of the method of operating upon, and of treating calculus in the bladder as carried out in the Civil Hospital of Hyderabad, Sindh, which is considerably the largest hospital for lithotomy in India.

It may be interesting to the profession in England to mention that stone in the bladder is exceedingly common all

aware of this fact, seldom trouble themselves about it. Again, Sindh is probably one of the most dusty countries in the world, especially lower Sindh, so that the native inhabitants (Sindees) may truly be said to be continually eating and drinking fine particles of earth. I imagine there can be no doubt whatever but that this alluvial matter, all of which is carried down by the Indus, is the fountain head to which the origin of stone in the bladder can be traced in this part of India, and that the silt brought down by the river from its source supplies to the urine the earthy materials from which the calculi are formed in the bladder.

Table II. shows the number of patients operated upon who were able to trace their own disease (calculi) in one or more members of their family, including also their cousin relationship; it also shows the kinds of stones operated upon,

TABLE I.

Ages in quinquennial periods.	No. of cases operated on.	Result.		Average number of days in hospital.	Average duration of illness, in months.	Weight of stones corresponding to the different ages of persons operated on, arranged quinquennially.
		Cured.	Died.			
1 to 5 years	17	17	—	14	14	{ 3 dr.; 20 gr.; 40 gr.; 6 dr.; 3 dr.; 3 dr.; 1 dr.; 3 dr.; 1 dr. 12 gr.; 1½ dr.; 4½ dr.; 2 dr.; 1½ dr.; 2 dr.; 4 dr. 9 gr.; 3 dr. 20 gr.; 5 dr. 1½ dr.; 2 dr.; 1½ dr.; 2 dr.; 2 dr.; 3 dr.; 1½ dr.; 1 dr.; 5 dr.; 6 dr.; 5 dr.; 3 dr.
6 to 10 "	12	12	—	15	20	6 dr.; 5½ dr.; 1 oz.; 3 dr. 6 gr.
11 to 15 "	4	4	—	15	24	1 oz. 2 dr.; 2 oz.; 1 oz. 6 dr.
16 to 20 "	3	3	—	21	28	3 oz. 5 dr.; 1 oz. 2 dr.; 1½ oz.; 1½ oz. ½ dr.; 1½ oz.
21 to 25 "	5	5	—	25	30	7 dr. 12 gr.; 7 dr.; 4 dr.; 1 oz. 7 dr.; 3 dr.; 2 oz.; 1 oz. 2 dr.
26 to 30 "	7	7	—	25	30	{ 3 oz. 2 dr.; 1½ oz.; 2 oz. 6 dr.; 3 oz. 2 dr.; 1 oz.; 2 dr.; 1 oz. 2 dr.; 4½ dr.; 1 oz. 2 dr.; 1 oz. 5 dr.; 2 oz. 1 dr.; 1½ oz.
31 to 35 "	12	11	1	25	37	{ 5 oz.; 1½ oz.; 1 oz.; 1½ oz.; 2 oz.; 3 dr.; 3 oz.; 3 oz.; 3 oz.; 1 oz. 20 gr.; 1½ oz.; 2½ dr.; 3 oz.; 1 oz. 6 dr.; 3 oz.
36 to 40 "	15	15	—	28	37	3 oz.; 2 oz.; 1 dr.; 2 oz.; 3 oz.
41 to 45 "	5	5	—	28	38	{ 1 oz. 2 dr.; 2 oz. 2 dr.; 1 oz.; 4 oz. 5 dr.; 1 oz.; 2½ oz.; 1½ oz.; 2 oz. 6 dr.; 1½ oz.; 1 oz. 2 dr.; 3 oz.; 3½ oz.
46 to 50 "	12	12	—	30	45	4 dr. 6 gr.; 6½ dr.; 2 oz.; 1 oz. 3 dr.; 2½ oz.; 3 dr.
51 to 55 "	6	5	1	30	36	4 dr. 20 gr.; 6 dr.
56 to 60 "	2	2	—	30	24	1 oz. 3 dr.
61 to 65 "	1	1	—	30	36	2½ oz.
66 to 70 "	1	1	—	30	48	
Total	102	100	2	—	—	

TABLE II.

Number of cases operated upon.	Hereditary.	Non-hereditary.	Kinds of stones.			Quality of water used for drinking.	
			Lithic acid.	Phosphate of lime.	Oxalate of lime.	Well water.	Muddy river water.
102	23	79	20	70	12	8	94

TABLE III.

Number of cases operated on.	Number of stones in each case.				Number of cases previously operated on.	Interval between the first and second operation.	Weight of secondary stones.
	One stone.	Two stones.	Three stones.	Four stones.			
102	88	8	5	1	4	{ 1. Forty months 2. Twenty-seven months 3. Thirty-one months 4. Thirty-three months	2½ oz. 1 oz. 1 dr. 1½ oz. 1 oz.

over Sindh, a district in the Bombay Presidency about as large as England and Wales. Through the middle of this tract of land passes the mighty river Indus, which takes its origin from the melting snow of the far-off Hindoo Khoush Mountains, and courses down through the Punjab and Sindh, falling into the Indian Ocean south of Karachi. Indeed, I think I may say without fear of contradiction, that calculus in the bladder is much more prevalent in Sindh than in any other part of the world. It appears to be hereditary, and in my opinion it also arises from drinking the muddy water of the river Indus and its tributaries, which the natives of this country invariably do without filtering it, or even allowing to settle to the bottom of their vessels the silt which is suspended in it so abundantly as to render it quite thick and of a brownish colour; however, the addition of a few grains of alum makes it clear and sparkling; but the natives, though many of them are

as well as the quality of the water used for cooking and for drinking purposes. It will be seen that no less than 90 per cent. of the persons operated upon used for all purposes the muddy river water; nearly 23 per cent. may be said to have been hereditary; and nearly 70 per cent. of the stones operated upon were phosphate of lime. Professor Gamgee states that the sheep in the hill districts of Wales get stone in the bladder from feeding on the short grass, which is covered with dust, and which is peculiar to the sheep hills of that country; and I see no reason whatever to suppose that the prevalence of stone in Sindh may not be attributable to the same source. Professor Gamgee's statement no doubt applies to Sindh and the Sindees.

Table III. gives the number of stones extracted in each of the 102 cases of lithotomy under review, the number of cases previously operated upon, and the interval between the first and second operation, also the weights of the secondary

stones. All the secondary stones were composed of phosphate of lime.

From observation of several hundred cases of lithotomy, I find that it takes on an average about two years and a half for a stone weighing, say, two ounces to form—that is, of course, counting from the time the symptoms begin to be observed by the patient; a stone of five ounces will take seven or eight years to form. Small stones weighing only two drachms in the bladder of an adult, provided always that they be smooth on the surface, will cause very little inconvenience or suffering, and adults rarely apply for relief when the stones have only reached this stage of development. I have frequently operated on the same patient twice in from four to six years, each time the stone weighing from two to nearly three ounces. The lateral operation is the one invariably performed in the Hyderabad Hospital. The calculus is reached in the usual way; if it be small there is never any difficulty, but if large its successful removal can only be accomplished by long practice. In removing a large stone, it should not be taken out of the bladder with any degree of force, nor should pulling be resorted to, lest the neck of the bladder be contused and lacerated; of all others, this is the chief point to be attended to in lithotomy, for any departure from this, which should be considered a golden rule, would be the cause of immense mortality—a fact which is experienced by young operators, and which I have had experience of myself as a beginner. Before applying the forceps to the stone, the forefinger of the left hand is passed through the wound on to the stone, the size of which is ascertained, then a blunt pointed knife is passed along the finger, and the neck of the bladder incised according to the size of the stone; the wound is also enlarged proportionately; then, having applied the forceps, the stone is pulled in the proper direction, and at the same time rocked a little from side to side and from above downwards; this has to be very gently done. If the stone does not come then, the forceps is given to an assistant to hold, and the index-finger of the left hand is inserted into the wound, which is searched in every direction, and that part of it which is put on the stretch, by the pressure of the stone against it, is cut pretty freely in as many places as the circumstances of the particular case will demand. It matters not whether it be above, below, or to the right or left side; the soft parts must be cut in all directions, if necessary, rather than use force. Then the forceps is again taken from the assistant, and the stone gently pulled and rocked as before; it is on this procedure that the success of the operation for extracting a large-sized stone entirely depends, and the cutting process just described is repeated as often as necessary. Hæmorrhage is exceedingly rare, and is easily restrained. I have only seen three or four instances of severe bleeding amongst hundreds of cases, and these were soon arrested. After the operation the patient is placed on his side, the thighs being brought very close together; a compress of very fine tow (called by us in India “surgeon’s tow,”) is placed on the wound, and held there tightly by an assistant for half an hour or longer if necessary. This is the very best way I know of compassing the stoppage of hæmorrhage; it is very simple, no styptics being required, for these often do harm by irritating the bladder, and it is a great mistake to suppose that bleeding will take place into the bladder when the wound is pressed externally. Plugging the wound round a catheter should be avoided; it is most objectionable and hurtful to the patient. In the after-treatment no catheter is required to be placed in the wound; it does not answer, as it keeps up irritation of the bladder—the very thing, of all others, to be avoided after the operation. It is better that the urine should pass through the wound unaided, unless it happens to be stopped momentarily by clots of blood, and then it is sufficient merely to pass a straight silver tube, just to clear the passage for the urine to flow, and then withdraw it immediately. It is not very often that clots impede the passage of urine, and only when this occurs should a tube be passed through.

Hyderabad, Sindh.

THEFTS FROM MEDICAL MEN.—A young man was recently charged at Liverpool Police-court with a long series of thefts from the houses of medical men, committed whilst he was ostensibly waiting the return home of the doctor. The property stolen from over twenty members of the profession in Liverpool, Birkenhead, and Manchester, included many surgical instruments, a galvanic battery, and various articles of clothing. The prisoner was committed for trial.

ON FIVE CASES OF SPORADIC CRETINISM IN SCOTLAND.

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SPORADIC CRETINISM is not only interesting from its rarity, but has acquired an unusually high degree of importance of late from its probable affinity to myxœdema in adults. The following account of five cases I have lately met with, of which two are represented by woodcuts, will therefore be read with interest.

CASE 1.—G. B.—, a boy aged twelve years (Fig. 1). I encountered this case accidentally in my daily rounds, and was at once struck with the close resemblance he presented to the only case of myxœdema I had previously seen, that of a female aged fifty-six, and which I showed to the Medico-Chirurgical Society of Glasgow last winter. The boy was enormously swollen, and judging from his height, seemed only three years old, although I was told he had reached the age of twelve. On inquiry, the following particulars were elicited. His parents belong to the village of Ladybank, in Fifeshire, where I afterwards met with Case 2. They are both healthy and well developed, above the average height (the father being six feet high), not related to each other,

FIG. 1.

free from goitre, and of strictly sober habits, the father never having been intoxicated in his life. There is no history on either side of goitre, intermarriage of relatives, intemperance, or tendency to any hereditary disease. The boy is the fifth of six children, all of whom are well except himself. During gestation his mother felt ill, took little food, and vomited much. She had severe pains or cramps in the abdomen almost daily; these often compelled her to get out of bed at night and sit by the fire for hours together. When the infant was born he was large and stout, and, as the mother supposed, an unusually fine child; he was at least half as heavy again as any of her other children at birth. She soon observed, however, that he was very sluggish; he always leant forwards in her arms, and he slept a great deal; he seldom cried, and did not smile like other children; his skin was always cold. He did not grow taller; did not walk till he was five years old, and then with a feeble, tottering step, the slightest obstacle overturning him; he did not get all his teeth till seven, when also he first made some rude attempts at speech. He had become much stouter during the last two years. He is now three feet in height, and weighs 4 st. 1 lb. He measures round the head 20½ in., round the abdomen 29 in., and round the thigh 16 in. His legs and arms are short; he is extremely broad in proportion to his height; buttoned in his coat, which reaches below his knees, he is like a barrel, and is, in fact, a marked example of myxœdema. The face is as broad as it is long, dull, and expressionless; ears thick and doughy; lips thick; hands short, swollen, and clumsy; ab-