variety of bacillus coli isolated from an East Riding well water fermented at blood heat the commoner sugars within 18 hours, while dulcine remained unacted upon even after nine days; at air temperature the commoner sugars were fermented within two days, dulcine only after five days; some of the active dulcine growing organisms were then transferred to a fresh dulcine medium at air temperature, and the dulcine was at length fermented in two days, as with other sugars. From this dulcine culture organisms were transferred to fresh dulcine at blood heat and slight changes were observable after 24 hours. Thus, by this devious track it was possible to ferment dulcine at blood heat, whereas direct attempts had failed and continued to fail. Yet another instance illustrative of latency:—A laboratory variety of bacillus coli which did not ferment cane sugar at blood heat but readily fermented dulcine and the commoner sugars was kept at air temperature for 19 days when fermentation at length set in; the cane-sugar culture at blood heat, however, still remained inactive. The phenomena of latency would therefore appear to account for the difficulty in determining the precise origin of infection in such cases of disease as appear to arise *de novo*, while the phenomena of inhibition, as applied to new milk, would appear to have a parallel in the incubation period of zymotic disease as associated with man.

The clinician complains that though he looks to the laboratory for help often enough he is disappointed and sometimes betrayed, yet on the grounds of purest empiricism he can incur no risk in adopting such methods of feeding, prophylactic and otherwise, as are called for by the results of these experiments. For the infant in the struggle against disease following infection through the bowel there is clearly indicated first and foremost breast feeding in order that the maximum effect of the bactericido-inhibitory property of milk shall be fully secured. Next in order of value is bottle-feeding with new milk, such as is obtained under ideal conditions of early cooling, immediate delivery, and cool storage in uncontaminated vessels, although by this method the infant of necessity must be deprived of no less than three-fourths of the natural bactericido-inhibitory property of the breast milk.

Boiled milk can be of no value in staying the growth of organisms, while preserved milk functions as boiled milk in its behaviour towards organisms when dilution occurs or when there is absorption of the preservative from the bowel content; moreover, there is the added danger of the toxic effect of the absorbed preservative.

In discussing the value of bottle-feeding with new milk ideal conditions were assumed; even so, three-fourths of the special value of the breast milk were lost. Far different, however, are the conditions attending the milk-supply of large towns, for there is little doubt with bottle-feeding that practically the whole of the special quality of new milk and breast milk is lost to the infant population of large towns. As an alternative to breast feeding there would appear to be but one practical solution of the problem. The experiment of refrigerating milk immediately following milking and of storage at freezing point, with the result that when after 24 hours the milk is raised to air temperature it is found that one half of the original bactericido-inhibitory power persists, points plainly to the direction for reform needed in the present system attending the supply of new milk: a refrigerator-room for the dairy, insulated vans for rail transport, and cold storage in the house, such are the measures indicated if, indeed, there is to be a perceptible lowering in the mortality from infantile bowel-sickness.

[NOTE.—None of the negative observations here recorded appear to deal with milk during the first six hours following milking, nor is latency, as a factor, recognised.]

References.—Fokker, A. P., *Fortschritte der Medizin*, Band viii., 1890, S. 7. Klimmer, Archiv für Kinderheilkunde, 1903, Band xxxvii., p. 1. Sommerfeld, P., *Centralblatt für Bakteriologie*, 1904, vol. xxxvii., p. 716.

AN exhibition of engineering models of all kinds, electrical, optical, and scientific instruments, technical education apparatus, and lathes, tools, and workshop appliances will be held at the Royal Horticultural Hall, Vincent-square, Westminster, London, S.W., from Oct. 22nd to 26th inclusive. Many of the models will be shown at work and scientific lectures and demonstrations will be given, the subjects including colour photography, sound waves, wireless telegraphy, gyroscopes, x rays, radium, electric welding, and other interesting items.

FRONTAL BAND ALOPECIA AS A POSSIBLE SIGN OF EXOPHTHALMIC GOITRE AND ASSOCIATED CONDITIONS.

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THE object of the present communication is to draw attention to the occurrence of a congenital form of frontal band alopecia which appears possibly to be related to Graves's disease or exophthalmic goitre, on the one hand, and on the other to certain signs and symptoms connected with that malady.

Frequency of congenital frontal band alopecia and its definition.—I have not been able to find any reference to this form of band alopecia as a congenital condition. Hairlessness in this region appears to be a human infantile characteristic, but under conditions of normal development at a variable age the band becomes covered with hair; its persistence into later life constitutes the congenital frontal band alopecia or congenital high forehead now under notice. It is far more frequent in girls than in boys and in later years is apt to be more or less hidden in both sexes by the hair being brought over the forehead, but more especially in women. The band may be quite bald; more commonly it has a few short hairs as it nears the hairy scalp. It is almost invariably associated with bays that run backwards in a line with the frontal eminences; the bays are usually covered with a thin growth of hair; the whole band may be thinly covered with hair, or one side only may be thus covered and the other bare, or there may be a thin pencil of hair (see figure) on one or

Frontal band alopecia in a girl, aged 12 years, with enlarged thyroid gland. Brother has similar band. Mother died from phthisis.

both sides, indicating where in normal circumstances the hairy scalp would have commenced. The band itself may be about half to one inch in width; it is situated at the anterior margin of the frontal portion of the scalp and stretches across from one frontal eminence to the other. It is not easy to lay down any exact line of normal limitation of scalp margin, but it may be regarded, as a rule, as extending to the upper half of the convexity of the frontal eminences. When the band is marked, or when it is

indicated by a partial anterior rim of hair, there can be no doubt as to its presence.

The significance of the congenital frontal band alopecia.—The congenital frontal band alopecia often runs in families and is hereditary. In one case an acquired frontal band was added to a pre-existing congenital band. In both children and adults I have found it constantly associated with enlargement of the thyroid and tachycardia, nervousness, pigmentation, chilblains, epistaxis, patchy baldness, and sometimes tremors, a condition that suggests potential Graves's disease. In 18 cases of exophthalmic goitre the congenital frontal band alopecia has been found present, and no negative instance has so far occurred. Out of six cases of myxedema the frontal band alopecia was found in five, of whom two showed unequivocal and the other three less marked signs and symptoms of exophthalmic goitre. The sixth had no frontal band alopecia and nothing to suggest past or present Graves's disease.

So far some 96 cases of frontal band alopecia have been investigated. The present preliminary note is written with a view of inviting the attention of medical men who may be willing to help in further investigation of an interesting point. The band may possibly indicate some evolutionary change or may be degenerative or tropho-neurotic, or be a part of the obscure group of signs and symptoms associated with exophthalmic goitre. The age at which the hair grows over the frontal band area in normal cases is under investigation and will be determined by an examination of many hundreds of children outside the hospital class.

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A CASE OF INTRAPARIETAL HERNIA WITH VERY SMALL PERITONEAL OPENING, GIVING RISE TO SEVERE ABDOMINAL PAIN.

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THE patient, a married woman, aged 57 years, was seen by me in February at the Elder Hospital, Govan, complaining of abdominal pain, particularly at a point about midway between the umbilicus and symphysis and two inches to the right of the middle line. She stated that this pain began to trouble her about two years previously and that it had been gradually getting worse. It was aggravated by work and relieved by lying down and at times it was so severe as to cause sickness and faintness. She had already sought surgical advice but nothing had been detected which would account for the pain.

On examination the abdomen was found to be very pendulous and loaded with fat, rendering accurate palpation very difficult. The recti muscles were much displaced laterally. The patient had a small umbilical hernia which was not tender and gave rise to no discomfort; otherwise nothing could be made out save that over the site of the tender point it was thought that a slight thickening of the abdominal wall could be detected. This thickening however, was indefinite and she was therefore asked to return for further examination at a later date. This she did and on examination while standing a large mass of about the size of the closed fist with a narrow pedicle extending toward the abdominal cavity was detected. The patient now lay down and when an attempt was made to grasp the tumour for the purpose of further examination there were a sudden slip and slight gurgle and the swelling disappeared. Up to the time of operation many further attempts were made to get the mass to reappear but without avail, only the feeling of slight thickening in the abdominal wall being discoverable.

Operation.—The small umbilical hernia, which was loculated, was first treated and then the abdominal incision was prolonged downwards in the middle line for about three inches and the inner surface of the abdominal wall was inspected. The finger, passing over the smooth peritoneal surface, detected just at the point previously indicated by the patient as painful a slight thickening, certainly not more than a quarter of an inch in diameter. The abdominal wall was now everted and close inspection revealed a small raised

area with a minute central depression. So small was this depression that it was doubtful if it would admit a probe. Slight pressure with the point of the probe, however, served to gain access to what appeared to be a small sac in the abdominal wall. Dressing forceps were next tried and it was found that the minute mouth of the sac was extremely distensible, easily opening sufficiently to admit the finger, which penetrated a distance of one and a half inches when a little pressure was applied. An incision was now made round the mouth of the sac in the normal peritoneum and the sac, which then lay loosely in the abdominal wall, was dissected out. While very small when relaxed and, as already stated, possessing a very narrow mouth, it was capable of great distension, extending easily to the size of a Tangerine orange. A further point of interest was that the omentum, instead of lying in front of the coils of bowel, had become turned up, its free border being attached to the stomach and the whole being laden with fat. An attempt was made to remedy this and a redundant portion was removed. The wounds were now sutured, particular care being taken to secure accurate apposition of the cut peritoneal surfaces, and the patient was returned to bed. She made an uninterrupted recovery and has had no further trouble, the pain having quite disappeared.

The point of chief interest in this case is the extreme variability in the size of the sac which at times was very small, presenting a merely potential opening, while at others it was large and distended with bowel. The pain, on the other hand, while no doubt varying in degree, was constantly present save when the patient lay down, and thus one was faced by the problem of a patient suffering very considerable abdominal pain, particularly at a definite spot, in whom no definite lesion could be made out.

I have known patients suffering from small umbilical hernia state that at an early stage of the affection, before any prominent external tumour had appeared, they frequently had attacks of violent abdominal pain which compelled them to hold the abdomen with the hands while walking. In such cases I think the condition would be very similar to what was found in this one—a sac with a very narrow but distensible mouth. Probably the pain in such cases is due in part to nipping of a portion of the lumen of the bowel in the narrow mouth (causing the sickness and faintness referred to) and in part to the distension of the narrow mouth causing pressure on, and irritation of, the peripheral nerves.

Glasgow.

MULTIPLE FIBRO-MYXOMATA OF THE CHOROID PLEXUS.

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THE patient, a widow, aged 52 years, was admitted into the West Riding Asylum, Wakefield, in August, 1901, suffering from mania of some months' duration; she died in May, 1906, from tuberculosis of the lungs and intestines. Her form of mental disease at death was secondary dementia. Intemperance was the most potent etiological factor.

A necropsy was made 23½ hours after death. The skull was thick and dense; the diploë was almost obliterated. A rough deposit of new bone was found on the inner surface of the calvarium in the frontal region. The dura mater was thick and fibrous and firmly adherent to the skull in the frontal region. The Pacchionian bodies were greatly increased in size but not in numbers. The subdural space was distended with an excess of normal-looking cerebro-spinal fluid. The pia arachnoid was oedematous and gelatinous-looking all over the convexity of the brain, and milky opacities were seen along the course of the large veins. The sub-arachnoid meshes contained an excess of cerebro-spinal fluid. The brain weighed 1265 grammes. The hemispheres were symmetrical. The frontal lobes were much atrophied, the gyri being yellow in colour, somewhat angular and shrivelled, while the intervening sulci were shallow and gaped widely. The cortical surface was smooth and uneroded, and the general consistence of the brain was reduced. The lateral ventricles were both dilated and contained an excess of cerebro-spinal fluid. The ependymal lining was smooth and glistening; the vein of the corpus striatum was congested and tortuous. The