

were prominent, and she discovered a goitre, which rapidly enlarged. The goitre remained large four years and then disappeared.

CASE 27. *Incomplete Graves' disease; trembling, palpitation, pigmentation of skin, falling out of hair, attacks of spasm of hands and feet, emaciation, menorrhagia; sister to subject of preceding case.*—Mrs. J. L—, aged forty-three, is also attending under me at the Royal Free Hospital. She suffers from palpitation and trembling. The attacks of palpitation have been troublesome during the last three years, but only when excited or worried. Trembling, which she has noticed all her life to a certain extent, has been much more marked during the last three years. Both hands tremble when held out, especially the left, and she feels a trembling throughout the body. There is no exophthalmos, and no perceptible enlargement of the thyroid. The cardiac action has varied between 88 and 108 when counted. No abnormal physical signs in heart or lungs. She always feels better in cold weather than in hot, but experiences no disagreeable feeling of heat. She has flushings to the head. There is a brown pigmented discolouration of the skin on the abdomen and the back below the spines of the scapulae, also on the upper parts of the arm and the bends of the elbows. Her hair is thin and has fallen out very much. She is thin and has lost flesh considerably. The urine contains neither sugar nor albumen. The catamenia are excessive. She has had quinsy twice, and formerly had enlarged tonsils. For the last four years she has suffered about every week from definite attacks of migraine. At the age of nineteen she began to have fits of a peculiar kind, and these became worse and more frequent after twenty-six. In these attacks the hands and feet become rigid, and the thumbs turn inwards. She never quite loses consciousness. She is irritable and low-spirited. The family history of these two patients is interesting. Their father trembled nearly all his life; he was deaf, and this was said to be due to enlarged tonsils. One brother suffered from fits, and another is said to be extremely nervous.

CASE 28. *Graves' disease; duration twenty years; now cramps, slight goitre, and exophthalmos, but rarely palpitation and trembling.*—The last patient I have to show is Mrs. F—, aged forty-two, who has a history of Graves' disease extending over twenty years. She has had no other illness except ague, when a girl in Cambridgeshire. When twenty-two she noticed that her eyes were becoming prominent, and a goitre, of whose existence she was unaware, was discovered by her doctor. When twenty-five the goitre began to cause her inconvenience, and she also commenced to tremble very much. Sometimes she was so agitated she could not sign her name, and her writing was generally so shaky that she was quite ashamed of it. Another trouble then was great heat. It was not until she was thirty-two that palpitation troubled her, and she then first attended this hospital. In 1882 Dr. Bruce, under whose care she was, noted exophthalmos to a degree, together with considerable goitre and a mitral murmur. She was thin and unhealthy looking, and suffered from sweats, headache, and dysmenorrhœa. She did not attend very regularly, but generally experienced benefit from the medicine she took, consisting of iron, quinine, and digitalis. Her hair, which is very scanty, turned grey at thirty, and then began to come out very much. She has frequently suffered from diarrhœa and vomiting. She often had the giving way of the legs, and was unable to stand any length of time without falling. Trembling and palpitation continued bad until two years ago. Now she has no tremors, and only rarely trembling or palpitation. In March, 1888, she had tonic spasms of the hands, lasting some days, and she has had several attacks since. She occasionally has painful cramps in the legs. At the present time there is much visible pulsation of the vessels of the neck. The thyroid is only slightly enlarged, and there is slight exophthalmos, but no von Graefe's sign.

DISTRICT COTTAGE HOSPITAL, WATFORD.—The annual report, just issued, shows a considerable addition to the number of patients treated during the past year, and the growing usefulness of the institution. Since the opening in August, 1886, to the end of June, 1890, 229 patients were admitted, of whom 83 were treated in the year under review, against 59 in 1888. Of the 83 patients, 4 died, 67 were discharged cured or relieved, and 11 remained under treatment. The income, from all sources, amounted to £534 8s. 8d., and the disbursements to £549 8s.

ON THE ANALGESIC VALUE OF ANTIPYRIN INTRA- AND POST-PARTUM.

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FIRST used as an antipyretic in large doses, antipyrin has been found during the past five years to be an almost universal panacea in smaller doses for "nerve pain," and is now prescribed empirically in all cases of neuralgia of whatever part of the body. Its value in certain cases of dysmenorrhœa of the so-called "spasmodic" type first directed attention to the generative organs as a field for its use, and the medical journals up to the present time have scattered through them results arising from the use of antipyrin (certainly of a most variable character) in connexion with the pregnant condition and labour. It was with the object of verifying these results or not that the following investigations were undertaken. Windelschmid¹ published, among the earlier observers, an interesting case of relief from dysmenorrhœa which had lasted eight days, the patient being very violent. Relief was obtained by rectal injection of three doses of two grammes (about thirty-one grains) of the drug; the two first with an interval of twelve hours, the third twenty-four hours later. Convulsive action, which was present before its administration, also ceased. Dellenbaugh² and Chouppe³ also relate similar instances; the latter, in addition, found great benefit from a rectal injection given to a patient with a painful uterine myoma which had resisted all other remedies.

The mode in which this drug relieves uterine pain is doubtful; it is well known and, I think, generally acknowledged that the most essential properties of the uterine muscular fibres are: (1) Extensibility; (2) retractility; (3) contractility. The last is quite distinct from retractility, and always occurs when a strange body is to be expelled from the uterus. Uterine pains are produced by two different mechanisms: (a) When there is an absence of retractility and, as a consequence, the formation of clots; and when (b), in spite of sufficient retractility, pains persist in consequence of intemperate use of ergot, or retention of placental debris. Rivière⁴ thinks that antipyrin relieves the pain included in this latter class, but without touching or influencing the contraction. My own opinion, based on the following observations, is that the pain which the drug relieves is entirely a "nerve pain," or neuralgia uteri, and that its action on muscular uterine fibre is negative. I may quote Chiara⁵ in support of this assertion, who, as the result of its use in twelve cases of pregnancy, found that "in therapeutic doses, it does not show appreciable effect enough to make one believe in it as having an oxytocical or exciting action on the uterine fibre during pregnancy and the physiological state."

The questions which seem to be at issue regarding the use of this drug are the following: 1. Does its administration during or immediately after labour tend to relieve pain, and, if so, at what stage are its effects most marked? 2. Has it any effect on the uterine pains in augmenting their number or intensity, or the reverse? 3. Is cervical dilatation more rapid under its influence? 4. Does its administration promote or tend to post-partum hæmorrhage? 5. What is its effect upon the process of lactation? The property it possesses of diminishing high temperatures, as in puerperal fever, is of the highest value, but it appears to me outside the questions at issue. I think a word of warning should be given, however, as to its indiscriminate use in large doses in attempting to reduce pyrexia, as I have met with records of several deaths from collapse in the course of my research. Under the first heading the question naturally resolves itself into the relative value of the drug during the two stages intra- and post-partum.

To elicit an answer to the above, I carefully administered the drug to forty-two cases, and selected as many primiparæ as possible in consequence of the usually more lengthened

¹ Allgemeine Med. Central. Zeitung, 1888, No. 53.

² New York Med. Record, vol. i., 1887, p. 579.

³ New Orleans Medical and Surgical Journal, April, 1888.

⁴ Gazette Hebdomadaire des Sciences Médicales de Bordeaux. 1888. No. 32.

⁵ L'Antipirina in Ostetricia: Annali di Ostet. Ginecol. e Ped. 1885, p. 5.

stage intra-partum; thirty-one were of this type. The others, eleven in number, were chosen at random. The drug was not given until labour had commenced, and until the dilating pains had set in regularly; the number occurring in an hour was noted, and then compared with those which passed in the same time shortly after the administration of the drug. The temperature and pulse were taken at regular intervals, and notes made at the time as to the severity of the pains and the patient's statements as to the relief or not given by the medicine.

I append a typical case:—The patient was aged twenty-nine years and a primipara. Induction of premature labour at about the thirty-sixth week for slight pelvic contraction. March 11th, 1889 (3 P.M.): Induction by passage of a catheter. 12th: At 4.5 A.M. pains began, and recurred at 4.20, 4.32, 4.45, 4.52, 5.10 (or about six in one hour). At 5.27 A.M. fifteen grains of antipyrin were administered. The pains occurred at 5.55, 6.0 (sick), 6.7, 6.20, 6.30, 6.42, 6.55 (or seven in one hour, about), 7.10, 7.23, 7.30 A.M. At 7.45 A.M. a second dose of antipyrin (fifteen grains) was given. At 8.5 A.M. the patient was sick; at 8.15 she slept for eight minutes; pains occurred at 8.40, 8.55, 9.15, 9.40, 9.53, 10.15, 10.30, 10.35, 10.57, 11.20, 11.47, 12.16 noon (fourteen pains in four hours, or less than four in the hour). Cervix fully dilated, waters ruptured artificially. Labour terminated at 6.40 P.M.; living female child. Between rupture of waters and termination of labour, six hours and a half (nearly).

The method of administration was by the mouth and in 15 gr. doses, made up with half a drachm of compound spirit of ammonia and cinnamon water, including two doses given during the expulsive stage. Sixty grains were given. Sickness occurred after each dose during the first stage, and after the second during the expulsive stage. It will be noticed that the medicine had a slight effect on the rapidity of the pains, if anything there being a tendency to slight retardation at first, becoming more marked after the second dose. There was no doubt as to the relief from the pain after the first dose, both from the patient's own statements and from her appearance to bystanders, more after the second, but absolutely none during the expulsive stage. There was no post-partum hæmorrhage, and successful lactation followed. Appended is a table showing the results of the administration of the drug in the forty-two cases. It will be seen that I have divided this into four columns, and under the heading "Result" have given the value of the drug as judged by results obtained—i.e., whether from the patient's evidence or from her change in behaviour.

		Total Cases.	RESULT.		
			Good.	Mod- erate.	Nega- tive.
Stage of dilatation	(a) Primiparæ ..	31	15	6	10
	(b) Multiparæ ..	11	4	3	4
Stage of expulsion	(a) Primiparæ ..	12	0	4	8
	(b) Multiparæ ..	5	0	1	4
Post-partum ..	(a) Primipara ..	1	0	0	1
	(b) Multiparæ ..	8	5	0	3
As an agalactic ..	(a) Primiparæ ..	3	1	0	2
	(b) Multiparæ ..	4	0	2	2

Taking, first, the stage of dilatation, it will be seen that in 15 cases out of the 31 in which the drug was administered, or nearly 50 per cent., it was very beneficial—i.e., the patient either strongly asserted that she felt great relief, or it was self-evident by her falling asleep or becoming more quiescent. Among the multiparæ the cases relieved were not so great in proportion—viz., 36.3 per cent. On the other hand, the absolute failures among the primiparæ amounted to 32.2 per cent., while among multiparæ it was 36.3 per cent. Queirel,⁶ who admits the value of the drug chiefly in this stage, found its success undoubted in 15 women out of 20, or 75 per cent. Of these 15 patients, 11 were multiparæ, the other 4 being primiparæ. Of the 5 refractory patients, only 1 was a multipara, thus concluding rather that the action of antipyrin is more marked on that class. Winkle⁷ now never administers it

except during this first stage, and he has found the relief following its administration almost general. By comparing statistics when the drug was taken and when not, he gathered that it does not increase the duration of the first stage; but, on the contrary, tends to shorten it on an average about half an hour; while in the second stage it remains practically the same. Grandin⁸ corroborates these views. In the expulsive stage the results were practically negative, as absolute relief was never observed either in primiparous or multiparous patients. I believe that this statement is corroborated by all the writers on this subject, with one or two exceptions—viz., Fauchon⁹ and Lielski,¹⁰ the latter of whom found the results in his four cases "invariably excellent." Its administration post-partum for after-pains was chiefly among multiparæ, indeed I only once had a case of a primipara in which it could be called necessary, and there it was quite without effect. In the 8 multiparæ to whom it was given it was certainly very beneficial in 5, or 62.5 per cent.; and I found that the failures were those in which the after-pains were chiefly due to collection and expulsion of blood clot, while the successful ones were those in which the pains were more of a grinding and neuralgic character, and not followed by passage of clot. Milne¹¹ and Choupe¹² both found antipyrin of great value in these cases.

From the nervous influence which is doubtless at work in connexion with the process of lactation, it would be almost concluded without experiment that antipyrin would have some marked effect on the amount of milk secreted. Salemi¹³ mentions the case of a primipara of robust constitution. Weaning was necessary from the breasts being neglected and having become covered with sores. Ten days were occupied in attempting to effect this, including the use of iodide of potash and compression, but they all failed. He then gave 50 cgr. of antipyrin divided into three doses; the secretion diminished the first day, ceased the third, and did not return. My own experience is not so favourable; the drug failed entirely in two cases out of three in which it was given, but certainly succeeded in one. The patient was a nervous primipara confined prematurely, with much distended breasts and large quantities of milk. Her child died on the fifth day of immaturity. I used compression and 15 gr. doses thrice daily and ordered the usual diet; the effect was very rapid, and she felt relief after twenty-four hours, and the secretion ceased practically on the fourth day. The two multiparæ were absolute failures. Antipyrin is not eliminated by the milk secretion, and hence its use is not contraindicated in these cases. The effects of the administration of antipyrin on the cardiovascular functions and the nervous system are well worthy of note. Knorr and Filehne¹⁴ first pointed out the usual pulse retardation in 1884, while Winkle observed that generally the temperature fell from half to one and a half degrees F. After a dose of 15 gr. he found the pulse become somewhat more frequent and respiration quickened; but if the pulse at the time of giving it was rapid, it decreased it. My own experience is that in the greater number of cases, in addition to a slight reduction of temperature, half an hour after administration the pulse was diminished in frequency, the patient having at the same time, however, a sensation of palpitation, respiration did not appear to be appreciably affected. Dark and thin patients of neurotic type certainly seem to be more susceptible to its influence, and this is corroborated by Adams,¹⁵ who, in an elaborate paper on the therapeutics of the drug, warns us to administer it in small doses "to phthisical and thin people." Antipyrin may be administered by mouth, rectum, or by subcutaneous injection. The last is rendered much less painful by the addition of cocaine. By mouth it should always be taken with some diffusible stimulant like ammonia. Fatal cases as the consequence of its administration have been several times reported, but never during labour, and I know of no reason why it should not be given without apprehension provided the dose is below 25 gr.

Conclusions.—1. That antipyrin in doses of fifteen grains, repeated at proper intervals, is a remedy of great value in the dilating stage of labour, and more especially in primi-

⁸ *Ibid.*, 1888, vol. xlviii., p. 38

⁹ *Bulletin Général de Thérapeutique*, 1888, tome cxv., p. 81.

¹⁰ *Wiadomoscie Lekarskie*, 1888, No. 10, p. 289, quoted in *New Orleans Med. and Surg. Journal*, 1888, p. 233.

¹¹ *New York Medical Record*, 1888, vol. xxxiii., p. 38. ¹² *Loc. cit.*

¹³ *Bulletin Général de Thérapeutique*, 1888, cxiv., p. 554: *L'Antipyrine contre le Secréion du Lait*.

¹⁴ *Berlin. Klin. Wochen.*, 1884, No. 20.

¹⁵ *Journ. Amer. Med. Assoc.*, 1885, vol. v., p. 621

⁶ *La Semaine Médicale*, 1888, p. 93: *De l'Antipyrine dans les Accouchements*.

⁷ *New York Medical Journal*, 1889, vol. xlix., p. 14: *Antipyrin during the First Stage of Labour*.

paræ, but that its uncertainty of action renders it less reliable than chloral. 2. That during the expulsive stage of labour it is useless as an analgesic, in whatever way it may be administered. 3. That in certain kinds of after-pains it is very efficacious. 4. That it is without any eebolic properties, and has little or no effect on the frequency of occurrence of labour pains during the dilating stage, and does not aid dilatation of the os uteri. 5. That the effect of the drug appears to be more marked on impressionable and neurotic women and those of dark complexion and spare frame than on others. 6. That it should never be given by mouth without the addition of a diffusible stimulant.

Grosvenor-street.

A CASE OF OSTEOMA OF THE FRONTAL SINUS.

BY STANLEY BOYD, F.R.C.S. ENG., &C.

SEVEN years ago, in 1883, a swelling appeared on the forehead of M. H—, aged twenty, and was attributed to a kick and blow on the part within a year before, but both of these injuries were too slight to be mentioned at the time. The swelling was painted with iodine for a month, followed by mercurial inunction, with mercury and iodide internally. Since that time it has slowly grown, all treatment being discontinued after a few months. In 1885 the swelling was wide based and diffuse. At the end of 1888 it was much more prominent and defined. For some years there had been a free watery discharge from the nose.

When I saw him there was a prominent swelling of bony hardness, chiefly to the right of the mid-line of the forehead, long diameter (about $1\frac{1}{2}$ in.) transverse, short diameter (about $\frac{1}{2}$ in.) situate about half an inch above the root of the nose; base well defined, and as wide as any part of tumour; on the surface two points were separated by a depression. All round the base the frontal bone seemed too prominent, and there was a low rounded eminence running down over the right frontal sinus, suggesting the possibility of a growth in the frontal sinus. The mass was evidently an osteoma, and I hoped from the irregularity of its surface it might prove cancellous. It was sufficiently high on the forehead to make it possible that it had nothing to do with frontal sinuses of ordinary size. On July 11th an operation was performed. The hairy scalp was shaved for about an inch, and disinfected twelve hours previously. A semilunar incision was made, so that the top of the curve lay just below the hair, while the horns descended to the level of the mass, half an inch or so from the ends of its long diameter. Bleeding was very free and difficult to check, the total loss of blood being considerable. When stripped of periosteum the mass looked like a cancellous exostosis, and the protruding part was easily detached by a few blows with the mallet and chisel. The base was now seen to be surrounded by tags of mucous membrane. Evidently the growth had sprung from the posterior wall of the frontal sinus, and had pushed its way through the anterior wall of the space, in confirmation of which a collar was found round the neck of the protruding portion of bone, laid down evidently by the periosteum on the outer surface of the frontal bone. With mallet and gouge the base was removed piecemeal from the sinus, the mucosa acting as a guide to its limits. More than half as much again as the tumour was thus removed, and at one spot, near the middle line, the brain cavity was slightly opened, but the channel leading to the nose was not found. Next, in an endeavour to render the forehead quite symmetrical, the chisel was applied to the descending ridge and to the right, and mucous membrane, undoubtedly that of the right frontal sinus, was exposed, but the sinus was not opened. The flap was fixed in position and a compress dressing of mercurio-zinc cyanide gauze and wool applied. The operation lasted about one hour and three-quarters. Beyond a little headache after the operation the patient had no trouble of any kind. He was up for three hours on the third day, was dressed on the fifth day, when the wound was found completely healed, the scar being absolutely linear. The patient vomited some altered blood soon after the operation, and the discharge from the nostrils was blood-stained for several days. At first the patient thought the discharge diminished in amount, but on the twelfth day after the operation he reported that there was no diminution.

Such a case as the above is of sufficient rarity to merit publication. The tumour has been sent to the College of Surgeons, which possessed no such specimen. In considering the question of operation, the nature of the growth and its relation to the frontal sinus first claimed attention. The irregularity of the surface led me to hope that it would prove cancellous. I was, however, prepared with instruments to deal with an ivory growth. I was not told about the discharge from the nose until after the operation, or I should have concluded with some certainty that the growth sprang from the frontal sinus. Against this was the fact that the discharge came from *both* nostrils, whilst the growth did not occupy *both* sinuses. On the other hand, the blood after the operation tinged the discharge from *both* nostrils, and so far as I know the right frontal sinus was uninjured. I am inclined to think that the osteoma lay in a distended left frontal sinus, the septum between the sinuses being to the right of the mid-line, though I did not find the opening to the nose which evidently existed. I had hoped that this case would prove interesting as demonstrating one cause of persistent watery discharge from the nose, but the evidence connecting the osteoma and the discharge is far from conclusive. With asepsis I anticipated no danger to the patient from an operation, even though the frontal sinus were opened. For mechanical difficulty in removing the mass I was prepared. I had determined, in case of ivory osteoma, to endeavour to work with the chisel in soft tissue round the growth; failing this, to shave off the mass level with the frontal bone rather than enucleate it and leave a gap in the skull. This latter procedure has successfully checked the increase of such a tumour, possibly because the periosteum over it was destroyed in the operation. It occurred to me that the best treatment of cases of multiple osteomata of the facial bones might be the early removal by dissection of their periosteal covering.

Harley-street, W.

TWO CASES OF HÆMATO-PORPHYRIN IN THE URINE.

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AND

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CASE 1.—Miss A. B—, aged forty-one. Throughout life nervous and hyperæsthetic; has suffered from several shocks. First seen in August, 1889, complaining of menorrhagia, general headache, and pain in epigastric and umbilical regions and insomnia. The tongue was deep-red, denuded, and sore-looking. There was habitual constipation. She was under treatment by rest and feeding. All went well, except neuroses and photophobia and occasional deposits of earthy phosphates in the urine, till the period in October. Though of good colour, the discharge was much less than usual, lasting three days, and leaving vertical headache and confusion, with pelvic distress, which yielded immediately to mustard over the ovarian regions. From this time she became intensely neurotic, complaining of nausea, mental confusion, and hypogastric pain, always distressed because "last period was too little." During the week ending Nov. 16th these symptoms increased, with retching and occasional vomiting of food and mucus. The urine became scanty and uratic, to which was attributed the supra-pubic pain and frequent desire to micturate. On Monday, the 18th, pelvic distress being well-marked and the abdomen being distended, twenty grains of acetanilide were given in three doses within four hours. This caused marked cyanosis and collapse, with scantier urine, which when next passed (about ten ounces) was clear and of a deep port-wine colour, acid, sp. gr. 1031, with strong odour (not exactly urinous), and giving no reaction with HNO_3 cold, boiling and HNO_3 , picric acid, guaiacum, and Heller's tests, tincture of iodine, nor Fe_2Cl_6 . No spectroscope was available. There were no blood cells nor casts. Under stimulating treatment (hot liquid food with gin) the collapse subsided by Tuesday evening, the 19th, the urine being unchanged. That night she slept well, and the catamenia, due on Thursday, appeared rather suddenly on Wednesday, of a good colour, without clots, and in moderate amount.